No.

BOSTON

MEDICAL LIBRARY,

19 BOYLSTON PLACE.

MATHEWS'

MEDICAL QUARTERLY

A JOURNAL DEVOTED TO

DISEASES OF THE RECTUM, GASTRO-INTESTINAL DISEASE,

—AND—

RECTAL AND GASTRO-INTESTINAL SURGERY.

VOLUME II, 1895.

JOSEPH M. MATHEWS, M. D.,
Editor and Proprietor.

HENRY E. TULEY, M. D.,
Associate Editor and Manager.

LOUISVILLE, KY.
PRINTED BY JOHN P. MORTON & COMPANY
1895

BOSTON MEDICAL
APR 17 1897
LIBRARY.

CONTRIBUTORS TO VOLUME II.

ALLISON, CHARLES C.
ANDREWS, EDMUND.
BACON, JOSEPH B.
BARTON, JAMES M.
BAUGHMAN, J. N.
BUCHMAN, A. P.
BULLITT, JAMES B.
COOKE, A. B.
EVANS, G. B.
GANT, S. G.
GRANT, H. HORACE.
GREEN, W. O.
GUEST, J. W.
KELLY, HOWARD A.
LILIENTHAL, HOWARD.
MATHEWS, JOSEPH M.
PENNINGTON, J. RAWSON.
RAMSAY, OTTO.
RICKETTS, B. MERRILL.
ROBINSON, BYRON.
RODMAN, W. L.
RUTH, C. E.
SCHACHNER, AUGUST.
SMITH, A. LAPTHORN.
STRAUS, LEON.
TULEY, HENRY E.
WALLING, W. H.

CATALOGUED
APR16 1896
E. H. B.

COPYRIGHTED, 1895, BY
JOSEPH M. MATHEWS, M. D.

GENERAL INDEX.

PAGE

ALLINGHAM, HERBERT WM. (*Frontispiece*), ... 56

ALLISON, CHARLES C., ... 108, 220

American Medical Association (Editorial), ... 141

"American Operation," Remarks Upon, ... 108

ANDREWS, EDMUND, ... 303

Appendicitis, Four Cases of Atypical, ... 23

Appendicitis, A Clinical Note on Perforative, ... 29

Appendix Stump, ... 234

BACON, JOS. B., ... 1, 354

BAILEY, DR. WILLIAM (Editorial), ... 55

BARTON, JAS. M., ... 249

BAUGHMAN, J. N., ... 312

Books and Pamphlets Received, ... 97, 195, 297, 398

BOOK REVIEWS—International Medical Annual and Practitioners' Index —1894, 91....Principles of Surgery, by N. Senn, M.D., 91....A Manual of Modern Surgery, General and Operative, by John Chalmers DaCosta, M.D., 92....Practical Uranalysis and Urinary Diagnosis, by Charles W. Purdy, M.D., 93....A System of Legal Medicine, by Allan McLane Hamilton, M.D., and Lawrence Godkin, Esq., 93....Obstetric Surgery, by Egbert H. Grandin, M.D., and George W. Jarman, M.D., 94....Landmarks in Gynecology, by Byron Robinson, M.D., 95....A Syllabus of Lectures on Human Embryology, by Walter P. Manton, M.D., 95....The Medical Review Visiting List—1895, 96....The Sympathetic Nerve, by Byron Robinson, M.D., 96....A Collective Investigation as to the Influence of Albinism on the Eye, by George M. Gould, M.D., 96....The Students' Medical Dictionary, by George M. Gould, M.D., 191....The Physician's Vade Mecum, by Sebastian J. Wimmer, M.D., 191.... Antisepsis and Antiseptics, by Charles Milton Buchanan, M.D., 192 ....Sexual Neurasthenia, by George M. Beard, M.D., 193 . . .Syrup of Hydriodic Acid, by R. W. Gardner, 193....Surgery Two Hundred Years Ago, by The Antikamnia Chemical Co., 194....Synopsis of the Practice of Medicine, by William Blair Stewart, M.D., 194....A System of Legal Medicine, by Allan McLane Hamilton, M.D., and others, 194....System of Surgery, by Frederick S. Dennis, M.D., 288 ....Surgical Pathology and Therapeutics, by J. Collins Warren, M.D., 289....A Manual of the Modern Technique of Surgical Asepsis, by Carl Beck, M.D., 290....Suggestive Therapeutics in Psychopathia Sexualis, by Dr. A. von Schrenck-Notzing, 291.... Materia Medica and Therapeutics, by John B. Biddle, M.D., 292.... Clinical Gynecology, Medical and Surgical, Edited by John M. Keating, M.D., and Henry C. Coe, M.D., 292....Surgical Nursing, by Bertha M. Voswinkel, 293....A System of Legal Medicine, by Allan McLane Hamilton, M.D., and others, 293....A Handbook of Derma-

Book Reviews—Continued— PAGE

tology, by A. H. Ohmann Dumesnil, A. M., M. D., 294....Transactions of the Antiseptic Club, by Albert Abrams, 294....Kola, Illustrated, by Johnson & Johnson, 295....Diet Lists and Sick Room Dietary, by Jerome B. Thomas, M. D., 295....International Medical Annual and Practitioners' Index—1895, 295....Medicine, Edited by Harold N. Moyer, M. D., 296....The Therapeutical Applications of Peroxide of Hydrogen, etc., by Chas. Marchand, 295....International Clinics, 296....Maltine with Coca Wine, 296....Transactions of the American Pediatric Society, 296....Hematherapy, by T. J. Biggs, M. D., 296....The Care of the Baby, by J. P. Crozier Griffith, M. D., 393....Syphilis, by Alfred Cooper, F. R. C. S., Eng., 395....System of Surgery, Edited by Frederick S. Dennis, M. D., 396....The American Academy of Railway Surgeons, Edited by R. Harvey Reed, M. D., 396....A Hank-book of Tuberculosis Among Cattle, Compiled by Henry L. Shumway, 397....Antiseptic Gauze, by Johnson & Johnson, 397.

Buchman, A. P., ... 234, 321
Bullitt, Jas. B., ... 121
Care of Persons Found Unconscious on the Streets (Editorial), ... 362
Correspondence, ... 63
Cooke, A. B., ... 226
Cooper, Mr. Alfred (*Frontispiece*), ... 145
Cripps, Mr. Harrison (*Frontispiece*), ... 265
Dangers Increase with Uplight Skyward (Editorial), ... 360
Editorials, ... 51–7, 141–5, 262–5, 360–6
Evans, G. B., ... 222
Fistula in Ano, Report of a Few Rare Cases, ... 354
Fistula, Recto-Vaginal, ... 8
Fistula, Horse Shoe. A New Procedure in Operating, ... 110
Gant, S. G., ... 14
Gastric Catarrh, ... 237
Grant, H. Horace, ... 23, 244
Green, W. O., ... 351
Guest, J. W., ... 29
Hemorrhoids; Prolapsed Rectum; New Operation, ... 319
Hernia, Operative Treatment of, ... 114
Higher Medical Education (Editorial), ... 262
Index Medicus (Editorial), ... 57, 364
Intestinal Anastomosis, Three Cases of End to End, ... 129
Intestinal Anastomosis, Comparative Value of Mechanical Devices in, . . 244
Intestinal Anastomosis, Modern Methods of, ... 253, 325
"Intestinal Indigestion," 321
Intestinal Obstruction, Diagnosis and Treatment of Acute, ... 249
Intestinal Surgery, Mechanical Devices in, ... 344
Intestines, The Length of the Small, in One Hundred and Thirteen Cases, ... 338
Kelly, Howard, ... 212
Lecture, A Clinical, ... 125

PAGE
Lilienthal, Howard, ... 129
Mathews, Joseph M., ... 16, 125, 203
Necrology: Oliver Wendell Holmes, ... 58
W. Carroll Chapman, ... 267
Dr. William Goodell, ... 61
Notes and Queries, ... 100, 199, 301, 401
Notice to Contributors, ... 402
Palmer, Edward Rush, M. D. (*Frontispiece*), ... 365
Pennington, J. Rawson, ... 110
Pile and Polypus, A New Clamp for 14
Piles, Disastrous Results Following Whitehead's Operation for, and the So-called "American Operation," 303
Pile, Compound External: A Case, ... 351
Public Health, A Department of (Editorial), ... 52
Ramsey, Otto, ... 103
Rectum, The Sacral Method of Extirpation, ... 1
Rectum, A Report of a New Method of Examining, ... 103
Rectal Surgery, Some Points in, ... 16
Rectal Surgery, Some Suggestions in, ... 203
Rectal Surgery, First Years' Work at St. Elizabeth's Hospital, ... 222
Rectal Surgeons, A Meeting of (Editorial), ... 263
Rectal Literature (Editorial), ... 51
Reflexes, Rectal, A Case in Point, ... 227
Rectal Cases, A Concise Report of Some Interesting, ... 216
Rectal Excision by Kraske Method, ... 220
Ricketts, Merrill, ... 319
Robinson, Byron, ... 338, 344
Rodman, W. L., ... 114
Ruth, C. E., ... 234
Schachner, August, ... 253, 325
Sigmoid, A Report on a New Method of Examining, ... 103
Sigmoid Flexure, Disease of the, ... 312
Sigmoid Flexure Disease (Editorial), ... 354
Sigmoiditis, A Case of, ... 348
Sigmoido Proctostomy, ... 212
Smith, A. Lapthorn, ... 8
Societies: American Association of Obstetricians, ... 38
Grant College Medical, Bombay, ... 33
Kentucky State Medical (Editorial), ... 143, 264
Louisville Academy of Medicine, ... 136
Sphincter Ani, Divulsion of in Bright's Disease, ... 134
Straus, Leon, ... 216
Surgery, Unjustifiable (Editorial), ... 142
Trusses and their Application, ... 121
Tuley, Henry E., ... 349
Walling, W. H., ... 134
Wile, Wm. C. (Editorial), ... 57
Word to the Busy Doctor, ... 69, 269, 367

WITH OUR EXCHANGES—*Rectal Disease.* PAGE

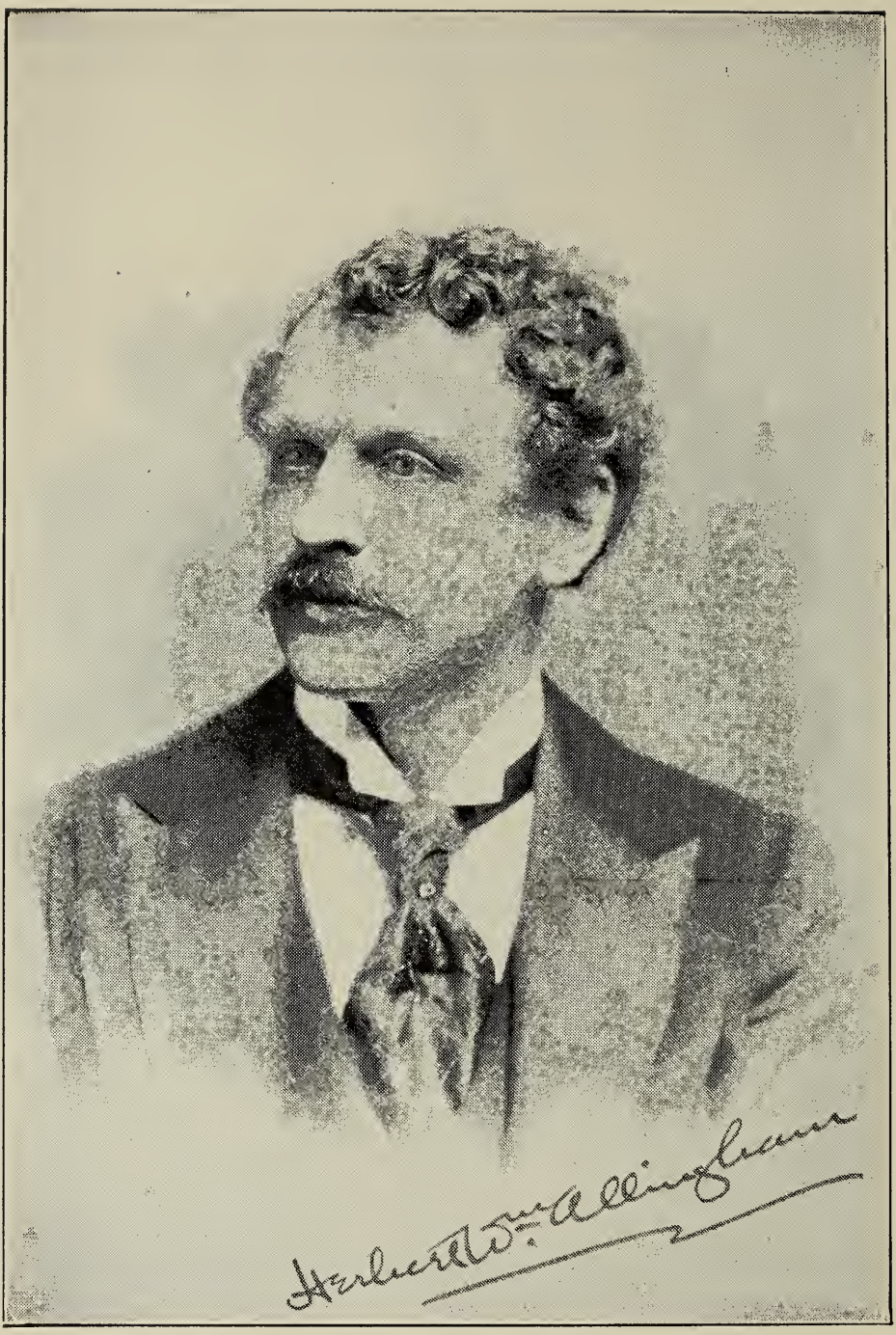
Anus, Artificial, The Formation of, ... 384
BACON, JOS. B., ... 149
BAUGHMAN, J. N., ... 155
BLOOMFIELD, J., ... 156
Cancer, Rectal, ... 273
COSTON, H. R., ... 278
DAVIS, WILL B, ... 376
Dermoid Tumors, ... 75
EDWARD, F. SWINFORD, ... 273
ELLIOTT, LLEWELLYN, ... 382
FERGUSON, A. H., ... 157
Fistula, Cause of Abscess ot Labium, ... 157
Fistula in Ano, Etiology of, ... 146
Fistula in Ano, ... 149, 155, 382
Fissures and Ulcers of Rectum, ... 75
FULTON, ANDREW L., ... 153
GANT, S. G., ... 271
Hemorrhoids, A New Method of Operating for, ... 72
Hemorrhoids, A New Operation for the Radical Cure of, ... 379
Hemorrhoids, Internal, and their Treatment, ... 376
Hemorrhoids, Treatment of, ... 278
Hemorrhoids, Operative Treatment of, ... 77
HENDERSON, N. H., ... 379
JONES, THOS., ... 151
KELLOGG, J. H., ... 72
Labium, Abscess of, Due to Fistula, ... 157
LAVENSTEIN, ... 384
MATHEWS, J. M., ... 146
MONCHET, ALBERT, ... 276
PAUL, F. T., ... 369
PORTER, IRA W., ... 154
Piles, In Unique Malformation of Urethra, ... 156
Polypus of Rectum, ... 276
Rectum, Excision of the, ... 369
Rectum, Treatment of Cancer by Excision, ... 51
Rectum, Stricture, Malignant and Non-Malignant, ... 153
Rectum, Prolapsus of, in Children, ... 154
Rectum, Treatment of Stricture of, ... 271
Rectal Cancer, ... 273
Rectal Feeding, ... 274
Rectal Stricture, ... 277
Recto-Vaginal Fistula, A New Method of Treating, ... 157
STEWART, R. W., ... 75
SINGER, G., ... 274
TAYLOR, H. M., ... 75
TAYLOR, JOHN W., ... 157
TRINKER, ... 77
WOOD, ... 277

Gastro-Intestinal Disease— PAGE

ALLISON, CHAS. C., ... 166
Appendicular Abscess, ... 80
Appendicitis, A few points on, ... 83
Appendicitis, ... 85
Appendicular Colic, ... 90
Appendicitis, McBurney's Incision of Abdominal Wall in, ... 176
Appendicitis, Indications for Surgical Interference, ... 178
Appendicitis, Incision of Abdominal Wall in Operation for, ... 185
Appendicitis, Recurrent, ... 287
Anastomosis of Small Intestine, ... 174
ARNOLD, F., ... 160
AUGUST, ALBERT, ... 287
BENEDICT, A. L., ... 183
BECK, CARL, ... 186
BURDICK, G. G., ... 286
Button, use of Murphy, ... 182
Cecum, Carcinoma of, ... 186
CHAMPIONNIERE, LUCAS, ... 388
CLARK, N. L., ... 170
COYLE, JOHN G., ... 280
Constipation in Infancy, ... 189
Colon Tube, A New, ... 170
Colotomy, Three Cases of Left Inguinal, ... 164
CRIPPS, HARRISON, ... 174
CRITTENDEN, WM. J., ... 391
DANIEL, JAMES, ... 80
DEGARMO, W. B., ... 82, 385
DUJARDIN-BEAUMETZ, ... 173
Duodenal Ulcer, ... 286
Dysentery, ... 187
Dysentery, Chronic, Chaparro Amargoso in the Treatment of, . . . 391
Dyspepsia, So-called, ... 167
Diarrhea, Infantile and Sterilized Milk, ... 189
Enteritis, Pseudo-Membranous, ... 280
FRANK, LOUIS, ... 159
FRANK, JACOB, ... 190
Gastric Neuroses, Painful, ... 89
Gastric Affections, Means Employed in Diagnosis and Treatment of, . 173
Gastrotomy for Foreign Bodies, ... 188
GRAHAM, D. W., ... 182
GREUTZNER, P., ... 164
HAYEM, ... 169
HARRIS, M. L., ... 190
Hernia, Case of Congenital Diaphragmatic, ... 170
Hernia, Surgical Treatment of, ... 172
Hernia, Strangulated Femoral, Case of, ... 180
Hernia, Strangulation of Appendix Vermiformis in, ... 182
Hernia, Case of, in a Girl Five and a half Years Old, ... 190
Hernia in Children, ... 82
Hernia, Inguinal and Femoral, A New Operation for, ... 86

Gastro-Intestinal Disease—Continued— PAGE

Hernia, Injection Treatment of, . . . 87
Hernia, Mechanical Treatment of, . . . 166
Hernia, Strangulated, A Study of Thirty-nine Cases, . . . 385
Hernia, Umbilical, The Radical Cure of, . . . 388
Holt, L. Emmett, . . . 189
Howitt, Henry, . . . 78
Hydrochloric Acid, Estimation of, . . . 392
Infantile Diarrhea and Sterilized Milk, . . . 189
Intussusception, Surgical Treatment of in Infants, . . . 78
Intestinal Fistula Following Celiotomy, . . . 159
Intestinal Peristalsis, Physiology of, . . . 164
Intestine, Anastomosis of Small, . . . 174
Intestinal Obstruction due to Gall Stone, . . . 184
Intestinal Ulceration in Albuminuria, . . . 187
Intestinal Anastamosis, . . . 188
Intussusception in the Male, . . . 390
Jessup, T. R., . . . 90
Jones, A. A., . . . 89
Korte, . . . 184
Lindmore, C., . . . 160
Liebman, Gustav, . . . 284
Marcy, Henry O., . . . 172
Marvin, J. B., . . . 167
McArthur, L. L., . . . 185
Murphy, J. B., . . . 162
Murphy Button, Bad Effects of the too Frequent Sterilization, . . . 190
O'Keefe, P., . . . 85
Packard, John H., . . . 164
Reed, Chas. A. L., . . . 86
Rogers, B. W., . . . 84
Robson, Mayo, . . . 188
Rupture, Parenchymatous Treatment of, . . . 160
Seers, George G., . . . 170
Senn, N., . . . 179
Steele, D. A. K., . . . 178
St. Philippe, R., . . . 189
Stomach Tests in Murder Trials, . . . 284
Smith, . . . 187
Stomach Tube, Menthol Spray Through, . . . 183
Stomach, Lesions of, . . . 169
Stretton, J. Lionel, . . . 390
Summers, J. E., . . . 176
Suture of Intestine, . . . 179
Walling, W. H., . . . 87
Weissinger, W. S., . . . 180
Wiener, Von Jaksch's Clinic, . . . 392
Winslow, W. C., . . . 187
Wiggin, F. H., . . . 188


Herbert W. Willingham

BOSTON MEDICAL
APR 17 1897
LIBRARY

H145

MATHEWS'
MEDICAL QUARTERLY.

"ALIS VOLAT PROPRIIS."

Vol. II. JANUARY, 1895. No. 1.

Original Contributions.

THE SACRAL METHOD OF EXTIRPATION OF THE RECTUM.

BY JOSEPH B. BACON, M. D.,
Professor of Rectal Diseases in the Post-Graduate Medical School.
CHICAGO, ILL.

[Written for MATHEWS' MEDICAL QUARTERLY.]

It is now ten years since Kraské gave us this new and valuable method for removal of pelvic growths, and like all new operations it could not be properly judged until at least one hundred cases had been reported, so that its advantages and dangers could be analyzed. Kraské advised that the method be used only for rectal growths, but shortly after successful cases in that line had been reported Hochenegg recommended that pathological conditions of any of the pelvic organs might be in many cases advantageously attacked through the sacral incision. Many modifications have been made by numerous surgeons of the original operation as suggested by Kraské, and each one claims a great advantage of his improvement over the original and all others. But as time goes on we are convinced that the new changes have little to recommend in them, and that there is but one original thought to the operation, and that is to enter the pelvis by the sacral and coccygeal route as suggested by Kraské.

The modifications have special advantages only in those cases where the growth or stricture involves the center of the rectum, and after its removal the ends of the gut are reunited.

In cancers of the rectum Cripps condemns the suturing together of the divided bowel on account of the numerous failures to get union and the increased danger of sepsis. And in most cases where union has taken place there has been a contraction of the scar to a serious degree.

The literature upon the subject as yet refers principally to European surgeons, and while I have been able to collect only two hundred and four cases, we know that this represents only a small per cent. of the total in Europe and America if all were published. In this list I have endeavored to report only cases of operations that were, strictly speaking, performed by the Kraské method. Many hundreds of cases are recorded where the classification has been so improperly reported that one can not tell from the records whether they were done by the new or old method, hence I have left these out. We all know that there is no more brilliant and aggressive surgery done anywhere than in America, yet when one looks for reports of cases of extirpation of the rectum by the sacral method the literature is very scant, and one must conclude that many of our leading surgeons have not met with brilliant results in this line of work, and may be withholding their reports for a better percentage of mortality. The cutting away of a part or all of the two lower sacral vertebræ and coccyx, together with the entire removal of the anus and rectum for an extensive cancerous growth, when first suggested, even in this age of aseptic surgery, seemed quite rash. But when one looks over the names of reputable surgeons in the accompanying list and compares their results with the old method, and when he stops to think that this list comprises cases as a rule that were entirely inoperable by the old method, then he can not but be convinced of the really great advancement made in surgery when the sacral method was devised for reaching these growths.

My own personal experience has been limited to three cases:

1891. Case 1. Male, aged thirty-four, with extensive carcinoma of the rectum extending from the internal sphincter up the rectum five inches. Removed the anus and rectum, and sutured the lower end of the gut into the upper angle of the wound. Patient made an uninterrupted recovery, and lived twenty-one months, secondary cancer growths having begun in the peritoneal

lymphatics and extended to the bladder and prostate, causing death from exhaustion.

1892. Case 2. Male, aged sixty-one, extensive carcinoma of anus and rectum, necessitating their entire removal. Death after forty-eight hours from shock.

1894. Case 3. Female, aged thirty-five, specific stricture of anus and lower four inches of the rectum with incontinence complicated by fistulæ. She had undergone four operations for its relief during the past four years, twice by divulsion, twice by internal proctotomy. Operation April, 1894. Complete excision of anus and four inches of the rectum. Uninterrupted recovery.

In Case No. 2 the growth had involved the prostate and base of the bladder, yet this was not diagnosed on account of the stricture and thickness of the rectal walls. The growth appeared to be distinctly movable, and therefore operable, but the age of the patient was too advanced for so extensive an operation, and a colotomy instead should have been done.

In Case 3 the peritoneal cavity was not opened.

Fenger, of Chicago, lays great stress upon the location of the cancer as to whether it is high or low in causing the high or low percentage of mortality after the operation. The peritoneal cavity must be opened in all cases of high cancers, while it is rarely opened when the cancer is situated very low. In both my carcinoma cases the peritoneum was freely excised, with a mortality of fifty per cent.

Fenger did four high operations for cancer, with a mortality of 50 per cent., and seven operations for cancer situated low down in rectum with a mortality of 28.5, and five operations for stricture by the sacral method with no deaths. He collected statistics of eighteen operations for high carcinoma with a mortality of 50 per cent. In the 204 cases recorded by European and American surgeons are twelve operations for strictures, with no deaths. Of the 192 cases operated upon for cancer 58 died, a mortality of 28.4 per cent. These cases date back to the beginning of the operation, and many of them were operated upon that would be classed as inoperable to-day, and thus the present mortality for the operation would be very materially lessened. Kraské reported, in 1885-6-7, 10 cases with 4 deaths, a mortality of 40 per cent.

König collected statistics showing a mortaility of 24 per cent.

Recently Von Burgmann has reported 27 cases with only one death, a mortality of 3 per cent.

Thorndike has collected statistics showing an average mortality by the old method of 16 per cent.

As only those cases of cancer or stricture that were situated low in the rectum or at the anus were operable by the old method, the statistics are in favor of the new method.

McCosh states that he has observed that excision of cancer gives greater relief than any other method. I have observed in my two cases that they had continence of feces, except at times, when from excess in eating a diarrhea would be set up. Fecal continence with them was much better than with any of my cases of colotomy. We should naturally expect this when the sigmoid was left, and where an acute angle is made by bending the lower end of the gut to unite it with the skin at the upper angle of the wound.

While the statistics of the sacral method are too new for us to form a definite opinion as to the lease of life the operation will give, yet we must expect from the more thorough removal of the growth that life will be prolonged on an average over the old method.

Czerny, during thirteen years of operating at his clinic at Heidelberg, performed 109 operations for cancer of the rectum by the old and the new method. Of these, 10 cases died from the operation.

Twenty per cent. lived 2 years, 15 per cent. lived 3 years, 13 per cent. lived 4 years, 8 per cent. lived 5 years, one case lived 6 years, one 8 years, one 11 years, and one 13 years.

From these results we must have great anticipation of being able to do much for this pitiable class of cases in the near future. The fact that rectal diseases are being recognized as belonging to regular specialists in that line will tend to more and more loosen the grasp of the irregular practitioner from this class of patients, and as a result cancer will be more frequently recognized in the early stage of its growth, and the possibility of its cure by operation greatly increased.

The cause of death in many of the cases comprising the list was not given, but most of them were from sepsis. Unfortu-

nately aseptic work in rectal surgery is all but impossible, but much can be gained by thoroughly cleansing the anus, and then, in those cases where the anus and rectum are both to be removed, firmly close the anus by a strong ligature or heavy forceps and keep the bowel closed by not severing it above the growth until after the peritoneal cavity has been closed by sutures or packing or both. Five cases died from pulmonary embolism. Schede reports three deaths from this cause, due to fresh thrombus in the femoral vein, and suggests that the forced flexure of the hip-joints, together with the elevation of the pelvis, as practiced by many operators in order to lessen the hemorrhage while doing a sacral section, is a very dangerous procedure on this account.

ADVANTAGES OF THE SACRAL OVER THE OLD METHOD.

1. By removal of the coccyx and a part of the sacrum, operation upon the rectum is comparatively an open one, and the hemorrhage can be reduced to a minimum.

2. The operation can be rapidly done.

3. Growths that were inoperable by the old method are readily removed.

4. It prolongs life and gives greater comfort than colotomy.

5. Fecal continence is much greater than after colotomy.

Date.	Publication.	Operator.
Oct., 1892	North Am. Practitioner	Joseph B. Bacon.
Oct. 17, 1893	Boston M. and S. Jour. CXXIX, p. 561	H. O. Marcy.
June, 1893	Mathews' Med. Quarterly, I, p. 76	H. O. Walker.
July, 1893	Mathews' Med. Quarterly, I, p. 77	H. O. Walker.
.....	N. Y. Med. Jour., 1892, LVI, p. 253	A. J. McCosh.
April 16, 1891	N. Y. Med. Jour., 1892	A. J. McCosh.
July 3, 1891	N. Y. Med. Jour., 1892	A. J. McCosh.
Aug. 3, 1891	N. Y. Med. Jour., 1892	A. J. McCosh.
July 8, 1891	Atlanta Med. and Surg. Jour., 1892, IX, page 129	J. McFadden Gaston.
.....	Lancet, 1892, I, p. 1235	W. H. Brown.
1889-93	Annals Surgery, 1893, p. 189	A. G. Gerster.
1889-92	Int. Jour. Surgery, 1893, p. 282	J. M. Mathews.
1889-91	N. Y. Med. Jour., 1891, p. 310	F. Lange.
1889-91	North-West. Lancet, 1891, p. 61	P. H. Millard.
Sept. 11, 1891	Lancet-Clinic, 1891, p. 430	L. J. Krouse.
April 25, 1893	Annals Surgery, 1894, p. 675	W. Meyer.
.....	Annals Surgery, 1894, p. 675	F. Kammerer.
.....	Annals Surgery, 1894, p. 675	F. Kammerer.
June 16, 1894	Pitts. Med. Rev., 1894, p. 126	X. O. Werder.
Oct. 25, 1893	Glas. Med. Jour., 1894, p. 321	A. E. Maylord.
May 9, 1889	Med. Chron., Manchester, 1894, p. 419, J. E. Platt.	

Date.	Publication.	Operator.
Dec. 10, 1889	Med. Chron., Manchester, 1894, p. 419,	J. E. Platt.
Jan. 29, 1890	Med. Chron., Manchester, 1894, p. 419,	J. E. Platt.
Oct. 7, 1890	Med. Chron., Manchester, 1894, p. 419,	J. E. Platt.
Dec. 26, 1893	Med. Chron., Manchester, 1894, p. 419,	J. E. Platt.
Jan. 17, 1894	Med. Chron., Manchester, 1894, p. 419,	J. E. Platt.
Sept. 3, 1890	Jahr d. Hamb. Staats Kranken	C. Sick.
July 25, 1894	Jahr d. Hamb. Staats Kranken, p. 451.	C. Sick.
July 21, 1891	Jahr d. Hamb. Staats Kranken	C. Sick.
1892	Internat. Clinics, 23, III, p. 205	R. F. Weir.
1893	Medical Record, 1893, p. 715	G. E. Abbott.
1892	Gaz. Med. de Nantes, 1892–3, XI, p. 61,	Boiffin.
Dec. 1, 1892	Nork. Mag. f. Laryn., 1893–4, r. VIII, 44,	Nicolaysen.
Dec. 22, 1889	Wien. Klin. Woch., 1891, IV, 862	Hochenegg.
July 21, 1890	Wien. Klin. Woch., 1891, IV, 863	Frank.
Feb. 19, 1891	Wien. Klin. Woch., 1891, IV, 863	Hochenegg.
March 22, 1891	Wien. Klin. Woch., 1891, IV, 864	Hochenegg.
Oct. 1, 1888	Wien. Klin. Woch., 1891	Hochenegg.
Jan. 27, 1889	Wien. Klin. Woch., 1891	Hochenegg.
April 10, 1889	Wien. Klin. Woch., 1891	Hochenegg.
Feb. 7, 1889	Wien. Klin. Woch., 1891	Albert.
Nov. 17, 1889	Wien. Klin. Woch., 1891	Frank.
Dec. 13, 1888	Wien. Klin. Woch., 1891, 903	Ullmann.
Oct. 21, 1888	Wien. Klin. Woch., 1891, 903	Hochenegg.
Sept. 17, 1888	Wien. Klin. Woch., 1891, 903	Hochenegg.
Aug. 6, 1888	Wien. Klin. Woch., 1891, 904	Ullmann.
Jan. 4, 1890	Wien. Klin. Woch., 1891, 904	Hochenegg.
Aug. 24, 1889	Wien. Klin. Woch., 1891, 904	Hochenegg.
Nov. 19, 1889	Wien. Klin. Woch., 1891, 904	Frank.
Aug. 21, 1890	Wien. Klin. Woch., 1891	Frank.
Jan. 15, 1890	Wien. Klin. Woch., 1891, 904	Frank.
Oct. 24, 1890	Wien. Klin. Woch., 1891, 905	Frank.
April, 1894	Wien. Klin. Woch., 1891	Joseph B. Bacon.
May 8, 1890	Wien. Klin. Woch., 1891, 905	Hochenegg.
Oct. 18, 1890	Wien. Klin. Woch., 1891	Hochenegg.
May 4, 1891	Wien. Klin. Woch., 1891, 906	Hochenegg.
June 6, 1890	Wien. Klin. Woch., 1891	Hochenegg.
July 31, 1891	Brit. Med. Jour., 1892, p. 330	J. C. Davie.
March 21, 1892	Wien. Med. Woch., 1892, XLII, 1084	E. Herczel.
Aug. 4, 1889	Cong. France de chir., 1889, p. 662	S. Pozzi.
May 27, 1890	Bull. et mem. de la soc. de chir	Richelot.
June 29, 1890	1891, us. XVII, 125	Richelot.
Dec. 6, 1890	Bull. et mem. de la soc. de chir., 129	Richelot.
Dec. 30, 1890	Bull. et mem. de la soc. de chir	Richelot.
Dec. 18, 1890	Bull. et mem. de la soc. de chir	Richelot.
Dec., 1889	Beitr. z. Klin. Chir., 1889, I, p. 607	Stierlein.
Sept. 19, 1889	Bull. et Mem. Soc. de Clin., 1889, p. 676,	Routier.
May 18, 1890	Gaz. Hebd. de Med., 1890, 23, XXVII, p. 327	Moulonquet.
June 28, 1889	Wien. Klin. Woch., 1889, 2, p. 597	Hochenegg.
Oct. 23, 1888	Gaz. Med. de Strassb., 1890, XLIX, p. 49,	Boueckel.
Dec. 29, 1888	Gaz. Med. de Strassb., 1890, XLIX, p. 49,	Boueckel.

Date.	Publication.	Operator.
March 30, 1889.	Gaz. Med. de Strassb., 1890, XLIX, p. 49,	Boueckel.
Dec. 10, 1889.	Gaz. Med. de Strassb., 1890, XLIX, p. 49,	Boueckel.
Jan. 10, 1890.	Gaz. Med. de Strassb., 1890, XLIX, p. 49,	Boueckel.
Oct. 15, 1889.	Bull. et Mem. Soc. de Chir., 1889, v, 15, p. 666.	Routier.
Oct., 1889.	Bull. et Mem. Soc. de Chir., 1890, v, 16, p. 397.	Poisson.
Nov. 27, 1889.	Wien. Med. Bl. XIII, 1890, p. 291.	Zaloziecki.
Nov., 1889.	New York Med. Jour., 1889, p. 613.	Gerster.
Nov., 1888.	Spallanzani, 1888, v. XVII, p. 501.	Mazzoni.
Feb. 1, 1889.	Ber. Klin. Woch., 1889, XXVI, p. 309.	Samter.
Feb. 22, 1889.	Wes. Med. Rep., 1889, XI, p. 125.	Ochsner.
May 11, 1885.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
July 10, 1885.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
May 15, 1886.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
May 29, 1886.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
Sept. 14, 1886.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
Oct. 4, 1886.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
May 27, 1887.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
July 2, 1887.	Ber. Klin. Woch., 1877, XXIV, p. 899.	Kraské.
July 15, 1886.	Arch. Ber. de K. K. Krankenh, zu Wien., 1886, p. 226.	Wienlechner.
May 12, 1887.	Wien. Klin. Woch., 1888, I, p. 325.	Hochenegg.
June 1, 1888.	Wien. Klin. Woch., 1888, I, p. 325.	Albert.
Jan. 20, 1888.	Wien. Klin. Woch., 1888, I, p. 326.	Hochenegg.
July 12, 1887.	Wien. Klin. Woch., 1888, I, p. 348.	Hochenegg.
Aug. 18, 1887.	Wien. Klin. Woch., 1888.	Ullmann.
July 27, 1887.	Wien. Klin. Woch., 1888.	Ullmann.
April 16, 1888.	Wien. Klin. Woch., 1888, p. 349.	Hochenegg.
March 7, 1888.	Wien. Klin. Woch., 1888.	Ullmann.
June 7, 1888.	Wien. Klin. Woch., 1888, p. 350.	Hochenegg.
June 11, 1888.	Wien. Klin. Woch., 1888.	Ullmann.
June 26, 1888.	Wien. Klin. Woch., 1888.	Hochenegg.
.....	Am. Jour. Obst., 1891, v. XXIV, p. 567,	Cited by McArthur.
Dec. 10, 1884.	Verh. d. Deut. Nesell. f. Chir., 1885.	Kraské.
Dec. 31, 1889.	Verh. d. Deut. Nesell., Vol. XIV, part 2, p. 469.	Kraské.
Sept. 21, 1885.	Ch. f. Clin., 1886, Vol. XIII, p. 236.	Rinne.
June, 1893.	Norsk. May, f. Säger.	Nicholaysen.
April, 1893.	Ber. Klin. Woch., Vol. IX.	Czerny.
1889.	Medical Standard, Chicago.	Fenger.
1889.	Medical Standard, Chicago.	Fenger.
1893.	New York Medical Record.	Lange.
Vol. 2, 1890.	Jahrb. d. Hamb. Staats Krankenaust.	Schede.
Oct., 1892.	North American Practitioner.	Bacon.
1894.	Glasgow Medical Journal.	Maylord.
1894.	Annals Surgery.	Meyer.
1894.	Therapeutic Gazette.	Montgomery.
1890.	Wiener Medical Presse.	Iversen.
1892.	Deutsch. Zeit. f. Chir.	Schmidt.

RECTO-VAGINAL FISTULÆ AND FISTULÆ ABOUT THE ANUS IN WOMEN.

BY A. LAPTHORN SMITH, B. A., M. D., M. R. C. S., ENG., F. O. S., LOND.
Fellow of the American Gynecological Society; Gynecologist to the Montreal Dispensary; Surgeon to the Woman's Hospital.
MONTREAL, CANADA.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The evolution of obstetrics is gradually bringing about a distinct change in the nature of the injuries to the pelvic contents of women. This is evident from the observation of the cases of fistulæ especially, which one sees in the ordinary run of cases in a large hospital for women. Formerly fistula between the bladder and vagina was one of the commoner accidents of childbirth, while vesico-uterine fistula was seen occasionally. Now recto-vaginal fistula and lacerated cervix and perineum are the injuries most often met with. The reason for this change is obvious. In the earlier days of Marion Sims and Emmet patients were being constantly received at the New York Woman's Hospital from the more distant parts of the country, who, having been in labor several days with the child's head wedged in the pelvis, were at last delivered naturally or artificially with the result that the whole anterior vaginal wall and lower wall of the bladder had sloughed away from pressure. In some cases even the anterior lip of the uterus was also destroyed, so that the urine poured from the bladder into the uterus and thence into the vagina. But in those cases of long-delayed labor the perineum was rarely torn, and recto-vaginal fistula, which is generally a result of rupture of the perineum high up, was comparatively rare. The obstetrical fault of those times was leaving the patient undelivered too long. The obstetrical fault of the present day is the termination of the confinement altogether too soon. In a natural labor the child's head comes down and goes back, comes down a little further and goes back again, and so on many times before the perineum is stretched enough to allow the head to pass without rupturing the perineum; but in these days the forceps are used, it is to be feared too often to save the doctor's time, but at the expense of great inconvenience and suffering to the woman afterward. In some of the worst cases of rupture of the perineum that have come

under the writer's notice the accoucheur has been a young man who has been goaded to desperation by the taunts and threats of the old women who are so often to be found present on these occasions, and who draw invidious comparisons between him and other doctors who confined Mrs. Somebody-else in one hour, with her first child. In other cases the patient and all those around her keep asking the doctor if he can do nothing for her, when the head has not yet passed through the *os uteri*. In one case, however, which came under the writer's notice, there was no excuse for the doctor's excess of zeal. The lady, who was pregnant with her first child, was at a little family gathering until nearly eleven P. M., when on reaching home she was taken with the first pain. Not having much experience she sent for the doctor, so that he might not be out of the way when wanted. The latter arrived in haste with his bag, and at once commenced rapid dilatation of the uterus, or what might be called accouchement forcé. By two o'clock in the morning he had dilated it enough to put on the forceps, and from this time until six A. M., the husband stated that he applied them thirty-six times, by which time the patient was unconscious, although no anesthetic had been employed, and the doctor fell back into a chair, saying he was exhausted and could do no more. Another doctor was then called, who found the cervix and perineum frightfully lacerated. The patient was delivered, and a month or two later the writer repaired her tear, which extended into the rectum.

Most of the cases of recto-vaginal fistulæ which have come under the writer's notice were the result of such an injury, which had been repaired at the time or soon after, but in which union had not been obtained at the upper end of the tear. The worst case of this kind that the writer has ever seen was a French-Canadian woman, who had been delivered of her first baby at Worcester, Mass. Her accoucheur had sewed up a tear which extended more than half way up to the cervix in the recto-vaginal septum. The front part of the perineum healed very nicely, but at the top of the tear where the septum was very thin the stitches cut out, leaving an opening the size of a quarter dollar through which her motions all passed. The poor woman became an object of disgust to her husband and her friends, and, on the advice of a sister residing in Montreal, she came here. She was taken in

hand by a good surgeon, who freshened the borders of the fistula, which were very fibrous, and sewed them together with silk sutures. On the second or third day wind and feces came through the vagina as before. This surgeon showed great determination of character by repeating the operation four times, always with the same result, the fistula growing bigger each time. The poor woman was now discouraged, but soon after came under the writer's care. After thoroughly preparing her by cleaning out the bowels with castor oil, and after thorough asepsis of the parts the perineum was cut through as nearly as possible so as to reproduce the original injury, thus causing a wound of the septum extending from the skin up to the top of the fistula, which had been made larger and larger by each process of freshening of the edges which it had undergone so many times. The vagina was then carefully separated from the rectum until a point rather more than half an inch above the utmost limit of the fistula was reached. The tear in the rectum was now repaired by about fifteen interrupted catgut sutures, which were tied as soon as they were introduced, the knots all being turned into the rectum. When nearing the lower end of the gut care was taken to get a good hold of the ends of the sphincter, the ends of which were carefully freshened.

The vagina was then treated in the same way, so that two perfect tubes were obtained, and the condition of the perineum appeared the same as if a flap-splitting operation had been performed. Silk-worm gut sutures were now passed with a very long curved Peaslee needle from one side of the perineum to the other, taking care to go above the highest part of the rectal and vaginal stitches, but always keeping between the two canals. When these silk-worm gut sutures were tied there was a very strong perineal body, and the fistula was thoroughly closed by three different layers of sutures, so that sterilized milk injected into the rectum did not come through. The patient was ordered to subsist on unlimited quantities of beef tea, chicken broth, and other fictitious substitutes for food, for three days, and after that she was allowed water gruel, well boiled and strained. She was strictly forbidden milk in any shape or form on account of the large, hard motions it almost always produces. All went well for three days, when the patient suddenly felt a gust of wind from the vagina. The

patient knew by experience that the repair had given away again. She said that she felt sure that if that wind could be prevented from accumulating in the rectum the operation would be successful. This the writer determined to do the next time by placing a tube in the rectum and leaving it there until the union had time to become firm. The stitches were all removed and the surfaces freshened up and washed with bichloride solution, and the same operation was repeated as before. A piece of soft rubber tubing with a cross-piece passed through the end of it was introduced and held there by the cross-piece. This time the operation was a complete success, great quantities of wind passing out of the tube and good union being obtained.

These two points are of great importance, namely, always to insert a tube in the rectum to prevent the latter being distended with wind, and to forbid the use of milk in any shape or form for ten days. When the bowels are first moved it should always be by enema and never by cathartics, which might drive a large hard mass of feces against the still delicate line of union. The catgut drops into the rectum in about three weeks, while the silkworm gut is removed in from ten to twenty days.

Another case to which the writer was called in consultation with Dr. Haldimand, of this city, is of interest from the fact that it was what might be called the primary closing of a fistula. The patient had been delivered three or four days before of a very large child, and having a very firm and small perineum the latter was ruptured more than half way up to the cervix. The accoucheur at once repaired the perineum by sewing from the top of the tear down to the perineum. Much to his disappointment on the third or fourth night he was summoned by the nurse, who informed him that the patient had had a large motion through the vagina. He called upon the writer, with whose assistance the tear was repaired in the same manner as above described, a tube being inserted with a cross-piece to hold it in. Great care was exercised in disinfecting the raw surfaces before sewing them up. The night on which this was done the temperature was 103°, and the pulse was fast; but much to the physician's delight the temperature fell the next day, wind passed freely by the tube, and good union was obtained, the patient being up in as short a time and as well as if nothing unusual had happened. In this case the

physician deserved great praise for repairing the injury without delay, as many cases of puerperal fever and death are due to infection of the open lymphatics of the perineum, deaths which would be prevented if all injury in this locality were promptly repaired.

Small fistulous tracts, especially when situated in the perineum near the fourchette, can be closed by setting up inflammatory action and subsequent cicatricial contraction by passing through the fistula a probe covered with a thin layer of absorbent cotton, first wet and then rubbed over a stick of nitrate of silver. One such case came under the writer's care and was competely cured by two or three such applications.

Cases of fistula in ano are tolerably common. One of the longest and most tortuous came under the writer's care in a lady who was incapacitated for work thereby, owing to the discharge and pain. On examining the uterus it was found to be retroverted and fixed, and the ovaries and tubes were lying under it, so that it was decided to repair the fistula first and then to remove the appendages and fix the uterus to the anterior abdominal wall. The external genitals were first carefully disinfected, as was also the fistula, by injecting into it some bichloride solution. A fine gum bougie could be passed into the fistula a distance of nearly three inches, owing to the tortuous nature of the channel, and its location being thus marked out the perineum was split as in performing Tait's operation. The fistulous tract could now be seen somewhat in the form of a corkscrew, and it was quite easy to dissect it out with scissors, just as if it had been a piece of rubber tubing covering the bougie. The sides of the perineum were then brought together with silk-worm gut, making an excellent perineum, and union was obtained by first intention, the stitches being removed in ten days. This lady made an excellent recovery and has never had any trouble since.

Another case of fistula in ano came under the writer's care a year ago at the Montreal Woman's Hospital. It was situated on the right side of the vulva, and was about an inch and a half in depth. The probe could be felt by a finger in the rectum or in the vagina, but there was no communication with either of these passages. On laying it open with the bistoury it was found to be about two inches in length. The writer had had good success

in curing fistulæ in ano in men by pushing a director through the fistula into the rectum, making it a complete fistula, when before it was a blind external one, and then cutting through the sphincter ani transversely to its fibers, the wound being then healed from the bottom by keeping it filled with gauze. But this operation is tedious as regards healing, so it was decided to try thorough curetting, disinfection of the fistulous cavity, and allowing it to heal from the bottom. This was done a year ago at the hospital, but was not successful, for a year later it was in the same condition. A second operation was then performed as follows: The fistula was thoroughly opened up, and, the fistulous tract being clearly seen, the latter was picked up with a hook and dissected out with scissors. All sinuses were thoroughly curetted and washed out with bichloride. Deep silk-worm gut sutures were passed from one side to the other, which, being tightened, the whole raw surface of the fistula was brought into accurate apposition. The result was very satisfactory. The fistula closed by first intention and the woman is now free from pain and moisture about the anus. It seems to be the general opinion that the best way to treat a fistula is to cut the fistulous tract out and sew the surfaces together with either several rows of buried catgut or other animal ligature, or a single row of silk-worm gut. The result in these two cases was much more satisfactory than in any of the cases where the sphincter was cut across and allowed to heal by granulation. It is a wise precaution in all these cases to thoroughly stretch the sphincter ani at the time, so as to diminish lateral traction on the apposed surfaces.

250 Bishop Street.

A NEW PILE AND POLYPUS CLAMP.*

BY S. G. GANT, M. D.,

Professor of Diseases of the Rectum and Anus, University Medical College; Lecturer on Diseases of the Bowels at Scarritt Hospital and Training School; Rectal and Anal Surgeon to All Saints' Hospital, and Kansas City, Fort Scott & Memphis Railroad System, etc.

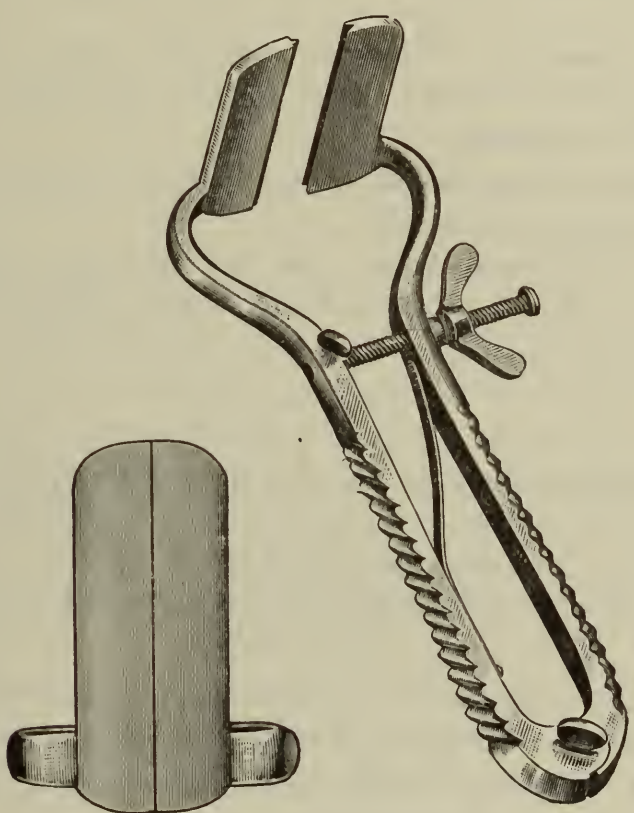
KANSAS CITY, MO.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

For a number of years I have been operating on piles by the clamp and cautery method almost exclusively. I do not select this method over that of the ligature for the reason that it effects a more radical cure, but for the reason that patients operated on by the clamp and cautery recover much more rapidly and suffer less pain than when the tissues are strangulated by a ligature. By the cautery we get a smooth, healthy ulcer the day we operate; with the ligature we have an irregular ulceration left after the ligature sloughs off on the sixth or seventh day. The latter will be just as long in healing as the former; consequently, by the cautery operation we practically gain over the ligature method almost the entire time from the removal of the tumors by the clamp until the ligature comes off. For some time past I have been dissatisfied with the pile clamps on the market for the reason that they do not exert equal pressure along the blade of the clamp, and, as a result of this imperfection, I came very near losing two patients from hemorrhage, caused by a portion of the tumor slipping through the clamp after the pendulous portion had been excised before I had a chance to cauterize it. The defect in the popular clamps heretofore, viz., Kelsey's, Smith's, Langenbeck's, etc., has been that they are made like a pair of scissors, having a rivet near the heel of the blade, and when a tumor is grasped tightly that nearest the tip of the blades is grasped loosely or not at all. Consequently, when the part external to the clamp is cut off all of the tissues except the part near the heel will retract through the clamp before the operator has a chance to cauterize it, thus subjecting the patient to a serious, if not fatal, hemorrhage. One year ago I set about devising a clamp, the blades of which would remain parallel and exert equal pressure at all points along the blade, no matter how

*Presented at the meeting of the Southwestern Association of Railroad Surgeons, at Memphis, November 1, 1894.

thick the pedicle of the tumor might be. How well I have succeeded the reader may judge for himself from the accompanying description and cuts. I have been using this clamp for the past six months to the exclusion of all others, and it has given perfect satisfaction at all times, and I feel justified in commending it to the profession. My clamp is so constructed that the blades are at a right angle to the handle, and always remain perfectly parallel, no matter how far they may be apart. This insures equal pressure at all points, and the tissues are held just as well



near the tip as at the heel, thus giving the operator a chance to cauterize all points of the pedicle before it is released. The following are some of the good points claimed for this clamp:

1. It is neat and attractive.
2. It is aseptic.
3. It is made strong; does not spring or get out of order.
4. It can be adjusted quickly and with perfect ease.
5. It has a strong spring that separates the blades, and a screw with a double thread and a tap on the nut is sufficient to run it from top to bottom.

6. It can be used equally as well with the patient in one position as another.

7. It is suited for the removal of piles high up in the bowels and when they are protruded.

8. It is admirably adapted for the removal of rectal polypi.

9. It can be used for the removal of polypoid growths in the vagina.

10. It is especially adapted for the removal of a section of the bowel in cases of prolapsus recti when the cautery is indicated.

11. It makes an admirable colotomy clamp. Causes the segment of gut to slough off in three or four days with little pain and no bleeding.

12. When it is desirable to crush piles it can be substituted for pile-crushers now in use.

13. It is the best clamp made, for the reason that it exerts equal pressure at all points and under all conditions.

Ninth and Grand Avenues.

SOME POINTS IN RECTAL SURGERY.*

BY J. M. MATHEWS, M. D.,
Professor of Surgery and Diseases of the Rectum, Kentucky School of Medicine.
LOUISVILLE, KY.

I feel deeply obligated to the members of this Society for its kind invitation through the worthy Secretary to read a paper at this session. The few remarks that I have to make I shall confine to the subject of *Rectal Surgery.*

About eighteen years ago I had the honor of inaugurating a move to place rectal surgery upon the basis of the other specialties. I am more than gratified now, after the elapse of this time, to be able to say that it is distinctively recognized in this country and in Europe as a legitimate specialty. Time was when these diseases were principally treated by the charlatan, itinerant, and quack. To-day some of the leading surgeons in nearly every State in the Union are giving this study special attention. Whereas it has been but a short time ago that the attention given

*Read before the Tri-State Medical Society, Atlanta, Ga.

to rectal diseases was very meager, we see now original research in this department reported in almost every medical journal, and by some of the ablest surgeons in the profession. We can all remember that the time was when very little surgery was done for the hemorrhoidal disease, the practitioner being content with treating it medically. Since interest has been aroused in this line, surgeons have vied with each other in their attempt to demonstrate which operation is preferable for hemorrhoids. Even the clamp and cautery plan and the ligature have been superseded in the minds of some who have followed Mr. Whitehead's advice, and who resort to the removal of the entire "pile-bearing" area. This operation, however, has not received much recognition in America, most all surgeons agreeing that it is too much surgery where a less amount will suffice. The carbolic-acid-injection plan has been relegated to the rear, the principle of which was opposed by all scientific surgeons. It was fraught with much danger to life and caused much local distress, was soon abandoned by the intelligent profession, and is now mainly used by the advertiser as a catchpenny. Of all diseases pertaining to the rectum fistula in ano is one of the most important. Before the days of this specialty the method practiced for its cure, even by the surgeon, was very crude and limited. Even our best text-books on surgery made it sufficient to say that all that was necessary to cure this affection was to pass a grooved director through the sinus and divide the structures thereon. In contrast to this Mr. William Allingham says, that to cure a complicated case of fistula in ano requires more delicate and precise surgery than most any other surgical affection of the body. All of us who have had to deal with severe, complicated cases of this disease can attest the truth of Mr. Allingham's remarks. In regard to the surgical treatment of the same it must be admitted that the knife takes precedence over every other plan. The elastic ligature, it is true, in the past has received considerable attention, and from such high authorities as Littell, Allingham, and others, but the test of time demonstrates that but few cases of this trouble can be cured by this means. The injection plan of sinuses, as practiced by some, is not worthy of consideration. *Irritable ulcer, or fissure,* of the rectum has received a good deal of attention lately by such men as Harrison Cripps, Adler, and others. The latter is

inclined to believe that many if not the majority of these cases can be cured by local treatment. If one will take the time to consider the pathology of this affection, it will, I think, be conceded that a simple divulsion of the sphincter muscle, which invariably cures all such cases, is much to be preferred to temporizing with local treatment. I desire to mention here that I never divide the muscle after the manner of Boyer, nor do I break the muscle after the manner of many surgeons. Neither, in my mind, is ever necessary, and by practicing such methods the office of the muscle is interfered with, if not entirely abolished. A great deal of attention has been given in the last ten years to the subject of the *reflexes* in a general way. And, too, specialists in every line have written much in relation to the reflexes in a special way.

At the International Medical Congress at Washington I had the honor of reading a paper, the title of which was, "The Anatomy of the Rectum in Relation to the Reflexes." In that paper I endeavored to show that much elucidation could be thrown upon many suspected diseases by tracing their origin to disease in the rectum. I meant only to convey the idea that many reflex symptoms could be made manifest through the nerve distribution from the affected part to distant parts of the body. The idea herein inculcated has been run away with in a wild manner by the so-called Orificial Surgeons, who are in the habit of removing an inch or two of the rectum for the most trivial cause of self-imagined reflex. I wish here to enter a most vigorous protest against this abominable practice. Such practice can not be too severely condemned by the medical profession, for in its wake lie many wrecked and wretched bodies.

One of the most important subjects to the rectal surgeon is *Ulceration of the Rectum.* It is a question often of very serious import, and one that staggers the physician, to determine whether it is malignant or non-malignant. I desire to say that simple ulceration of the rectum, from whatever cause, of any magnitude, is very seldom met with in my practice. In my book on Diseases of the Rectum I state it as my belief that sixty per cent. of stricture of the rectum, with or without the co-incident ulceration, is caused by syphilis. In said work I use these words: "Indeed so firm am I in this belief

that if it is a question between cancer or no cancer, and it is decided that it is not malignant, ninety-nine out of every hundred cases will, in my opinion, prove to be syphilitic." This opinion, in its entirety, has been challenged, especially by one authority in America. In addition to saying that my percentage of syphilitic stricture is too large, he persists in saying that I believe that ninety-nine out of every hundred cases of stricture of the rectum are syphilitic. I would beg any one who is interested in this subject to turn to page 346, chapter 15, in my book, and read the following: "Stricture the result of benign ulceration does not resemble in the least stricture from malignant causes. To the contrary, syphilitic stricture does to a degree resemble malignant growth. To be plainer, malignant disease and syphilitic disease invade the rectum as a deposit and infiltration of the sub-mucous tissues, etc. Ulceration here is secondary to the deposit and is caused by the friction of the passage of feces, or the breaking down of tissue, the result *of* the disease. Benign or simple ulceration begins with the damage done to the mucous membrane, and the infiltration is secondary to it, unlike both malignant and specific disease. Besides, a simple stricture is generally annular, and does not consist of a deposit in the sub-mucous tissue. I do not wish to convey the idea that ninety-nine out of every hundred cases of stricture of the rectum are syphilitic by any means, but I have been thus explicit because I have been quoted wrong in this matter a number of times." It does appear that these words should make my meaning clear, but it does not seem to have done so with the authority mentioned.

Cancer of the Rectum is of course all important to the surgeon. I have always maintained that where it was practicable it is better to extirpate the growth than to resort to colotomy. To the admirable device of Kraské we are enabled with much less trouble to remove the rectum and much more of it than by any other method, and he is to be congratulated upon his admirable operation. The time that I should occupy before your society will not permit me to deal extensively with this subject, and I only desire to say that in my opinion the surgeon who attempts the operation of removing the rectum under any other condition than that the growth can be circumscribed, and no infection exists, is guilty of wrong practice. I also desire to say that I believe, if the major-

ity of cases in which colotomy has been done could be investigated, that upon a thorough reasoning and scientific basis they could be pronounced unwarrantable. Much odium has been brought upon the medical profession for doing unjustifiable surgery, and in no department is this accusation founded in more truth than where many operations have been done upon the rectum and the colon. I wish I had the time to mention a number of operations that are new to rectal surgery, which would tend to prove to you the wonderful advance that has been made in this department in the last few years.

In this connection I desire to report three cases that came under my observation last week. I desire to call attention to the fact that three different methods were practiced in so many cases:

Case 1. Mrs. E., age thirty-five, was sent me from a southern city, and gave the following history: About two years prior to her coming she complained of pain in the rectum, radiating to the back, thighs, and ovarian region. This continued to increase for one year, when she went to a sanitarium for treatment. The physician in charge did an operation upon the cervix, and also attempted to repair a recto-vaginal fistula. She was kept in the institution several months without any appreciable benefit. She returned home, and after the lapse of six or eight months she came to me. Upon examination I found an ulceration that had completely infiltrated the rectum, involving the sphincter muscles and extending into the vagina. Its character was clearly malignant. The pain incident to the disease was unbearable. I at once suggested a colotomy to her, which operation was performed a few days after her arrival at the infirmary. Very great ease was afferded her by the operation. She sat up on the fifth day, and went home at the end of two weeks.

Case 2. Mrs. B., a young married woman, age twenty-three, was referred to me by a local physician. She gave the following history: About three years back she complained of pain in the rectum, with a thorough constipated habit; the pain, however, was never a factor in her case, but the constipation grew worse, and could in the last six months be called an obstipation for the reason that she could scarcely have an operation from the bowels at all. During this interim she had consulted several physicians, two of whom had attempted at different times to close a recto-

vaginal fistula. Both attempts had failed, and the surgery upon the perineum had left that portion of the anatomy in a shattered condition. Upon an examination with the finger I found extensive ulceration of the rectum, and a close stricture about one inch above the external sphincter muscle. The character of this ulceration was plainly syphilitic. I told the woman that this was my opinion, and she confided to me the fact that she was a courtesan before her marriage, and had had syphilis. I should add, that notwithstanding this extensive ulceration and close stricture, which would not admit the point of the little finger, this woman was in splendid physical condition and apparent good health. The process of gradual dilatation was made twice per week at my office by means of a speculum until, after eight or ten trials, the dilator was opened to its full capacity.

Case 3. Mrs. H., age forty, a widow, was referred to me with the following history: For about four years she had suffered with obstinate constipation, and for the past eighteen months had passed blood and mucus and pus *per rectum*. She was feeble and emaciated and very melancholy. Believing that the ulceration was beyond doubt syphilitic, the fact was ascertained by questioning that her husband had died six months before in an insane asylum from a syphilitic brain trouble. Upon examination I found in connection with the ulceration and stricture two fistulous tracts which had opened externally. I advised her to go to the infirmary, which she did, where I resected the stricture and laid open the fistulæ. The bleeding was so excessive in this case that the rectum had to be plugged after the operation.

It will be observed that in the first case I did the operation which I have condemned in this paper, namely, colotomy. My reason for so doing was that pain was a great factor in that case, and that the cancerous ulceration extended to the vagina, through which she passed most of her feces. In the second case I practiced gradual divulsion, although in my work on Diseases of the Rectum I condemn this method. It will be observed, however, that I used a dilator instead of bougies, and took only eight sittings to freely break the stricture. My reason for employing a gradual method instead of thorough dilatation at one sitting was that the perineum had been so injured by former operations as to render careful watching necessary for fear of further injury.

In the third case I practiced dissection of the stricture. My reason for this was that it was clearly within reach and the rectum above not much invaded.

One of the most important things connected with such cases is the after-treatment. Where the rectum has been resected after the manner of Kraské or others, or where the lower portion of the rectum has been removed, it is necessary to guard the patient against the fecal evacuation. Therefore it becomes of the utmost importance to look to the feeding and sustenance of the patient during perhaps a long convalescence.

Early in my career as a rectal specialist I relied upon controlling this feature by putting the patient upon the milk diet. I soon learned that this had objectionable features, so I was forced to look around for a substitute. I wish to say in this connection, these enfeebled patients who have undergone a severe operation upon the rectum need often a stimulant as well as food. This was never more clearly illustrated to me than during my treatment of case No. 1. This woman was not only greatly enfeebled and emaciated, but she was given to the morphine habit. It occurred to me that she needed special medication, and I hit upon the idea of putting her upon the preparation of Maltine with Coca Wine so strongly recommended by Dr. Henry C. Coe, of New York. By this combination I got not only a good food in the maltine, but an excellent stimulant with coca wine. Not only did it subserve these two purposes, but at the end of two weeks she was only taking one fourth a grain of morphine in twenty-four hours, instead of nine grains per day which she had been taking for months.

923 Fourth Avenue.

Gastro-Intestinal Disease.

FOUR CASES OF ATYPICAL APPENDICITIS.

BY H. HORACE GRANT, M. D.,
Professor of Surgery in the Hospital College of Medicine.
LOUISVILLE.

[Written for Mathews' Medical Quarterly.]

It is an axiom of physics that identical causes produce identical effects, and it requires but ordinary philosophy to understand that the many thousand apparent contradictions are apparent only. That the balls discharged successively from a cannon at the same elevation do not all strike in the same distant spot is due to many uncontrollable conditions, from want of uniformity in the ignition of the powder, to the most trifling currents of air. That inflammations originating from the same final cause pursue such varying courses is a part of everybody's knowledge, but many of the influencing conditions are absolutely inscrutable to any scientific investigator as yet, though the progress of pathology constantly enlightens us. In this reflection, however, is to be found sufficient reason to explain the courses of inflammation in the vermiform appendix, and to make absurd the fifteen or twenty varieties of some classifiers.

It is perhaps of more service to the profession to have, instead of the individual experience of each operator, a consideration of pathological processes he finds, and to look into these as the cause of the symptoms, rather than to detail these symptoms and the results obtained. It is my intention in this paper to present a report of four cases which are out of the ordinary run of appendicitic inflammations, to consider the pathological processes noted there, and to draw attention to the fact that any one of these pathological conditions may arise from a simple infection of the appendix, and to show that such a simple infection may produce conditions greatly varying in character and tendencies.

Case 1. J. A., a male, colored, twenty-eight years of age, strong and vigorous and well nourished. Was first seen on the

fifth day of the attack. On this day he walked some eight or ten squares to the Hospital College of Medicine. On examination he presented a tumor in the region of the appendix, which was tender and very sensitive, and could easily be seen. Little history could be obtained. His temperature was 101°, his pulse 80. He complained of considerable pain on motion, and discomfort even while resting; he had obstinate constipation of bowels, and gave a history of vomiting five or six days previous. A free incision was made over the tumor; the peritoneum was found adherent to the abdominal wall. Upon incision four drams of pus were found; there were, however, firm adhesions all around. A considerable amount of necrotic *debris* was to be seen at the bottom of the abscess. The appendix was not defined. The peritoneal cavity was not opened; irrigation with $\frac{1}{1000}$ solution of bichloride of mercury was made, and the wound was packed and allowed to heal from the bottom. The patient recovered without any untoward symptoms save an elevation of temperature on the evening of the first day. The bowels moved on the third day. There has been no further attack, and no hernia, after a period of seven months.

Case 2. J. P., male, white, twenty-two years of age, vigorous constitution. Was seen with Dr. J. T. Blackburn on the twelfth day. Patient gave a history of typhoid fever a year previous; he was supposed to be developing typhoid fever in this attack, until the formation of the tumor. In this attack there had been a history of free vomiting, constipation, and pain. The pulse at time of examination was 124, temperature 102°; tumor prominent. The patient still had some appetite and considerable strength. He was removed that night to St. Joseph's Infirmary, and an incision made over the tumor at 9 o'clock next morning; very little pus was found; a strong fecal odor arose as soon as the cavity was reached; the adhesions were slight and very friable. The appendix was found almost completely destroyed, and an extensive ulcer involving the entire head of the colon, with a perforation large enough to introduce three fingers. The colon was also thickened to one half of an inch, and highly inflamed; some general peritonitis was observed. However, there was no distension nor tympanites. Resection of the entire head of the colon was made, and the edges carefully approximated with Lembert

sutures of silk; the wound was left open and packed with iodoform gauze. The patient showed great shock on coming from the anesthetic, and died in thirty-four hours without an elevation of temperature, but with steady increase of pulse and great restlessness almost immediately after the operation.

Case 3. G. L., aged twenty-two years, strong and well nourished; had been under my observation in four successive attacks of appendicitis, in all of which a small tumor could be determined, and with ordinary symptoms. After the fourth attack, at my suggestion, he submitted to the operation eight days after getting out of bed. At this time the tumor had entirely disappeared. There was practically no tenderness over the site of the appendix. He was in good condition and felt about as well as usual. An incision four inches long was made over the site of the appendix. When the colon came into view there was little or no evidence of recent peritonitis. The finger was unable to detect the appendix, and the head of the colon was brought into the wound and the longitudinal bands traced down to the situation of the appendix. No evidence, however, of appendix could be found in this situation; with the assistance of Dr. Vance the field was carefully gone over, and we concluded that the appendix must have been entirely obliterated. After a rather prolonged manipulation, however, a hard lump was felt high up on the colon, and after considerable care and painstaking it was drawn down and proved to be the tip of the appendix. About two inches of the terminal portion of the appendix was found adhered to the side of the colon. This portion was easily peeled off by the finger, and was found completely separated from the stump; in other words, there was a complete obliteration of the middle of the appendix, and the stump portion of it was entirely sealed up. When the removed portion was split up it was found to contain some calcareous material. No ligature was necessary either to the appendix or to the mesentery. In other words, the terminal portion of the appendix was entirely free except the adhesions which bound it to the colon. The stump of the appendix being traced up to the colon was found to be attached, not to the region of any longitudinal band, but between them, fully three inches from the ileo-cecal valve and at least three or three and a half inches from the ordinary situation of the appendix. The stump

of the appendix was pressed down against the cecum and attached to it with one Lembert suture of silk. The wound was then closed without drainage and the patient put to bed. He made a perfect recovery without even the temperature or the pulse going above normal. Bowels moved on the third day in response to a saline, and beyond a little pain he was practically well all the time.

Case 4. Mrs. G., aged thirty-two, seen with Dr. Cochran at six o'clock in the morning. Dr. Cochran had seen her on the previous afternoon at three o'clock. She appeared to be suffering with intestinal colic; she was very constipated and vomiting. Under the influence of morphine she rested somewhat comfortably until three o'clock in the morning, when Dr. Cochran was called again. When I saw her at six o'clock she was in great pain; she vomited continuously, and was evidently collapsed; skin was cold, pulse 160, and very feeble. It was evident that she had a perforation of some kind. The conclusion arrived at by Dr. Cochran and myself was that she had had a perforation of an appendicular abscess. No operation was admissible. She continued to fail during the day, and died at six o'clock that evening. No *post-mortem* was allowed, and of course it is not possible to demonstrate the accuracy of the diagnosis. But the case is reported as indicating a pathological condition frequently seen in operations for appendicitis and *post-mortem* examinations, and simply for the sake of comparison.

Just a few words concerning the pathological conditions in these cases. Almost certainly the same character of lesion was to be found in cases one and two in the original attack. The disease began as a septic infection either of the mucous lining or of the interstitial structure of the appendix, presently involving the peritoneum. In case one, however, firm adhesions formed around the lesion and entirely shut off the peritoneal cavity. The necrotic process confined itself principally to the destruction of the appendix and the overlying structures, and did not involve the cecum at all. The general peritoneal cavity was not involved in the inflammation. It was deemed a wise plan not to disturb these adhesions, it being borne in mind that it would be safer to do a secondary operation provided a re-infection occurred, than it would be to break down these adhesions to the great danger of

infection of the general peritoneal cavity. In case two, however, infection, probably beginning in the same manner, pursued an entirely different course. Suppuration did not occur in this case, but an extensive necrotic process damaged the cecum as well as the appendix. Adhesions did not take place so as to shut off the general peritoneal cavity, and it is astonishing that extensive fecal extravasation did not occur. It is surprising that the patient went on for twelve days with an affection of this kind without perforation and general peritonitis. Evidently the general septic infection so weakened the patient that he was unable to bear the shock of operation, and he died rather from a condition of general prostration than of any post-operative inflammation.

Neither of these two cases probably was more virulent in origin than was the infection of case three in any one of the attacks. It appears that the severity of the inflammation succeeding infection depends largely upon the number and size of the colonies of the germs, as well as upon their character; and in case two the germs of suppuration were probably fewer in number than in case one. Their multiplication in some of the ways was arrested. At any rate there is no reason to suppose that there was any difference in the character of the infection which originated these three widely different results. Case three passed through four successive inflammations, presumably at its origin, of the same character and tendency as cases one and two, probably without any suppuration having existed at any time. That portion of the appendix which was the site of the original affection was gradually obliterated by the process of inflammation.

Professor Senn, of Chicago, has described at length a form of appendicitis which he denominates Appendicitis Obliterans, in which the lumen of the appendix is entirely destroyed, and the viscus is left as simply a cord. In this case, however, the appendix was completely amputated, and there was not enough of it left to require the application of a ligature. Strictly speaking, this is not a case of appendicitis obliterans, but rather a result of successive inflammation of a destructive character passing safely through the various processes of inflammation and absorption.

In case four, most likely, there went on an unnoticed subacute inflammation from an infection of the same character as originated the other three attacks of appendicitis with the formation

of an encysted abscess. This encysted abscess may have been only a few days old, or, as is more likely, it may have existed for a much longer period, weeks, or even months. Some sudden exertion, unnoticed perhaps by the patient, caused rupture of this abscess. A perforation, perhaps permitting the escape of fecal matter into the abdominal cavity, produced profound shock, prostration, and death.

These various forms of appendicitis are seemingly the termination of perhaps an identical cause. There is good reason to suppose that an infection which produced either one of these cases can and does constantly produce them all, and the sooner we understand that it is out of the judgment of any living man to foreshadow the course of such a cause, and the more faithfully we bear in mind that the most disastrous as well as the simplest results may follow any one of these causes, the better it will be for the patients who are entrusted to our care.

In some thirty cases of appendicitis, in which I have either operated or assisted, I have been unable to see pathological conditions justifying more than two or three types of appendicitis, nor am I able to understand from a study of the literature that many more varieties can be classified. By far the greater number of appendicitic inflammations arise from direct infection through the lumen of the appendix and pursue such course as the controlling conditions lead to.

Clinical Memoranda.

A CLINICAL NOTE ON PERFORATIVE APPENDICITIS.

BY JAMES W. GUEST, M. D.,
LOUISVILLE.

[Written for Mathews' Medical Quarterly.]

The literature of appendicitis has become so extensive that isolated cases will scarcely claim more than passing attention. It is not the writer's intention in this paper to discuss the pathology of the disease or the vexed question, when operation should be done, but merely to record a case in which operative interference was determined upon clear diagnosis, and the patient rescued from an otherwise hopeless condition. The deductions from such a single case as the following, I hope will prove of practical value in a surgical condition wherein so many important points are still under discussion.

Samuel B. Harris, aged thirty-one, occupation fireman of steamboat. Present history: November, 1888, patient woke up with a very severe pain in the right iliac region. The pain was so intense that he took a large quantity of whisky for relief, but it continued so severely that he sent for a physician who quieted him with a hypodermic of morphia. He was poulticed, and salines given for a few days. Patient was out of bed in one week. He resumed his occupation and had no trouble for a few months. February 3, 1889, he felt a very sharp pain in the same locality, and remembering his former trouble he at once sent for a physician. The physician also used poultices and hypodermic injections of morphia, and had him out in a few days. From this time he worked continuously for nearly five years without experiencing the least trouble and thought he was entirely cured.

January 8, 1894, patient was taken suddenly with the most intense pain in the same locality. He suffered for several hours before asking for medical attention. By this time he felt well enough to walk a few blocks to the Louisville Medical College

Dispensary. The physician in charge prescribed and requested him to return in three days. On returning home he found the pain so great that he sent to the dispensary for a physician, and two students were sent to take charge of the case. For three weeks he was poulticed, and salines and morphia hypodermically were freely given. It was three weeks more before resuming his place in the marine service. The patient was never told what his trouble was, or at any time an operation advised. He knew, however, that the three attacks were similar, for he was treated exactly the same way in each one.

Present history: September 13, 1894, during the night patient had a most acute pain in the right iliac region, the seat of his former attacks. He could not possibly get relief by domestic remedies or changing positions. He suffered severely until morning before asking for a physician.

The writer was called September 14th, at 9 A. M., and found him in severe localized pain referred to the right iliac region, with tenderness, rigidity of the muscles of that side, nausea, vomiting, and in profuse perspiration. There was extreme pain on firm pressure at the point of McBurney; pulse 108, temperature 100.2°; bowels had not moved for twenty-four hours. Diagnosis of appendicitis made, and operation advised at once.

I felt justified in believing that without surgical interference the disease would prove fatal in a few days, as he seemed beyond medical measures.

Consent was readily given and operation set for four o'clock. Patient given half an ounce Rochelle salts, followed four hours later by a large enema, which acted satisfactorily. The patient was given one fourth grain of morphia at 9:30. Getting a little rest from the morphia he absolutely refused to be operated upon; at 8 P. M. patient in great pain again, and given one fourth grain morphia, which only quieted him.

September 15th, at 10 A. M., patient in intense pain. The symptoms were so diagnostic of appendicitis, the tenderness had become more localized over McBurney's point, and the pain so acutely paroxysmal that I demanded the operation, but he positively refused it again. Nothing was left to do but relieve his suffering, so one fourth grain morphia was given hypodermically. At four o'clock patient in profuse sweating, with great pain, and

begging for the operation. Given one fourth grain morphia, and operation put off till early next morning; pulse 106, temperature 101°.

September 16th: Patient rested fairly well through the night and condition practically unchanged, except the tumor was not as well defined and the sensitiveness diminished; pulse 102, temperature 100.2°. Patient etherized and a lateral incision of three

inches made at the outer margin of the rectus muscle and peritoneum opened. Solid adhesions were found around the appendix, which was perforated, allowing about two ounces of pus to escape. There was a circumscribed peritonitis, allowing only a limited infection. After breaking through the adhesions the appendix was ligated and removed, and the intestine stitched with the Lembert sutures and the stump seared with pure carbolic acid. No irrigation used, but sponging with gauze and gauze drainage used. Only four sutures were placed, two on either end of the wound, and the center left to heal by granulation.

Patient has made an uneventful recovery. The wound is solidly healed without any signs of a ventral hernia.

I call attention to this case on account of the number of attacks and the perforation without any foreign body or cecal concretion found, a chronic catarrhal inflammation of the appendix causing the recurrent attacks and ultimately the perforation.

507–509 Second Street.

GRANT, H. HORACE, LOUISVILLE: THE TECHNIQUE OF APPENDIXECTOMY. (*American Practitioner and News.*)

While all the currents and pathways of the pathology of appendicitis are not yet explored to unanimous concurrence, it is settled that the first step in the lesion is invariably the initial phenomena of inflammation, whether physiological or pathological. And though this inflammation may remain physiological (so-called catarrhal appendicitis), it must not be forgotten that we have here the most favorable of all conditions for septic infection. These first steps establish a *locus minoris resistantiæ* favorable for the colonization and propagation with almost inconceivable rapidity of septic bacteria, and this nidus is in the heart of the enemies' country, the camp of the bacilli coli communis (whose *rôle* is certainly important if not exclusive), but over the hill. The danger is much as if one place a ripe apple in the close vicinity of a hornet's nest. The hornets may not attack it, they may bore into it once or twice and seek other pastures, or they may riddle it to ruin. Surely, if the apple or appendix could be safely removed at the earliest possible moment, it should be done; but in the case of the appendix at least, even if the operation in skilled hands is practically without mortality, it is not by any means always a feasible step. The question rather is, must we regard the danger to life in the less severe forms of appendicitis so threatening as to demand insistence on operative steps in the face of clamorous objection and serious inconvenience? Certainly the overwhelming majority of practical men still say "No!" In those cases severe at the outset, in those progressing even with milder symptoms without relief for forty hours, the answer is changed to "Yes," though delay, hesitation, and unsuitable surroundings will often protract the case to a hopeless condition.

Society Reports.

GRANT COLLEGE MEDICAL SOCIETY, BOMBAY, INDIA.

SANZGIRI, Y. M.—"EXTRACTION OF PILES," AS PRACTICED BY NATIVE HAKIMS.

My attention was first drawn to this subject about two years ago, when several patients informed me at various times that their piles had been "extracted" by native Hakims, in some peculiar manner, and that after such extraction they felt better. The method they described being unknown to the Western science of surgery or medicine, I felt curious as to the mode of operation. My curiosity was, however, gratified about eight months ago, when an opportunity offered itself to me to witness this interesting operation, the history of which is as follows.

A patient named S., aged thirty-five, tailor, came to me for treatment of external piles, which he informed me were of four or five years' duration. As his trade compelled him to squat on the ground, he felt greatly troubled by them lately. There were no active symptoms except some pain. The piles were three in number, closely situated, each about the size of a full grown pea. But their proximity was so close that they looked like one mass about one half an inch in length. For some days I gave him saline purgatives, which opened his bowels regularly, and gave ung. gallæ c. opie for external application. It relieved the pains a little, but the size of the tumor was not much reduced during the five or six days that he was under treatment. He became impatient for their cure, and I offered to remove them. But to that he would not consent, and consequently he put himself under the benign treatment of a native Hakim (in this case of the gentle sex—a Mahomedan woman). She gave him some applications for about a fortnight which caused much burning, and difficulty of sitting in the natural position, since the part round about the anus had inflamed owing to the application. On expiration of this period she offered to remove the piles with-

out the aid of any instruments. The patient came and informed me that his piles were to be removed that day, whereupon I expressed to him my desire of being present at that interesting operation, since I had before heard a great deal about this extraction and of the extracted piles being of the shape of an insect having so many feet, and when put into water would move, etc. This had piqued my curiosity and aroused a strong interest in me, and in consequence I presented myself at the patient's. When I went there I found the woman cutting some onions preparatory to some poultice which she presently prepared with the aid of butter and some spices, and kept it ready for future use. She then asked the patient to lie on the hand-and-knee position, and chose a dark corner for her operation though a well lighted one was available. After the patient was in this position she commenced to massage the patient's buttocks and the anal region with butter, large quantities of which she also introduced into the rectum in lumps. This is to be remembered. After massaging in this way for about half an hour, she suddenly called for hot water, and as it was not ready she created a great uproar, at the same time telling the patient's friends that she would not be responsible for the result if it be not immediately brought and was not of the proper temperature. The persons in attendance thereupon ran distractedly to fulfill her demands, their attention being thus deviated for a time from her operations. She then caused the hot water to be poured in a stream over the patient's buttock's and the anal region, and enjoined the patient not to draw in breath lest the pile would be drawn inward; in the meanwhile she dexterously manipulated and searched the rectum for the offending pile, and at last brought it out without shedding a drop of blood or without the aid of any instruments. Then the parts were fomented by the onion poultice previously prepared, and the patient was directed to lie quietly in bed. Now the so-called pile, which is on the table in the bottle marked No. 1, as you notice, has its one end charred to give it the appearance of being medicated — burnt at its distal end — while the proximal end shows a number of small branches which are popularly called its tiny feet with which it is said to move over water, but I had not the good fortune of seeing it so moving. You will also notice that the substance chosen was elastic, hollow, and its

peculiar branched appearance lends confirmation to the popular belief of its being an insect. In this case I immediately took possession of this substance, but generally they fry it with ghee, apparently to kill the pile, but, I believe, really to destroy its original identity, and then bury it under ground.

Now you will notice that the substance in the bottle labeled No. 1 is nothing but a piece of the bronchial tube of a goat or some other animal, whereon the characteristic cartilaginous rings are plainly visible; also the main tube dividing into bronchi can be observed. Under the microscope it also showed the characteristic histological structure of the bronchial tube. This little thing was introduced into the patient's rectum, I believe, with the large lumps of butter she introduced therein, during the massage that I described above. I was not aware of this procedure before, or else I should have examined the butter before its introduction.

After this interesting operation the process of medication goes on for some days more, by which time the piles, being sufficiently causticated, fall off and the patient thinks himself cured. But at times he pays the heavy penalty of being for ever saddled with a fistula, and even in some cases a portion of the rectum is known to be destroyed.

People are much deluded by this process of extraction of piles, since they believe that a pile is a sort of worm and its extraction is the real cure, while to the caustication they attach secondary importance as being only necessary to the more important process of extraction, and you know too well how the Hakims try to strengthen this belief. If people come to learn that any benefit they derive is from the slow caustication and that the extraction and the eradication of the disease is nothing but a farce, they would perhaps then prefer the more reliable methods of excision, cauterization and other operative procedures.

This is a practice of one class of Hakims. There is another class who undertake to cure the disease in three or four days, and their process, known as the "Madrasi process," is as follows: For three days successively they apply some ointment made of orpiment, or yellow sulphide of arsenic and nitrate of silver, and some catechu is added to modify the effect of arsenic, increasing

the quantity of nitrate of silver as necessary; and to protect the surrounding parts from the caustic effects of the application they smear it with a paste made of the seeds of strychnos potatorum. On the first day after the application the part swells, and they say that the piles come out if in hiding. On the second day it begins to harden, and a good deal of water runs out of the swollen part. On the third day they order poultices, which are continued for a day or two, and in course of time the piles drop off; and to complete this process they apply a solution of sulphate of copper on the part. I have placed a specimen of pile extracted by this process in the bottle marked No. 2, procured from a Vaid who had extracted it about three years ago.

I had no time to put this specimen under microscope, but it looks like a thrombotic pile, the longitudinal incision which I have made showing the blood clot which had remained confined in the blood-vessel for a number of years. The Vaid informed me that along with this two other piles were extracted, but they being of very small dimension he did not preserve them. He also said that all of them were nearly external.

On a consideration of these processes the question naturally arises whether these methods of curing piles by caustic application have any advantage over excision, cauterization, and other operative procedures. In my opinion, if the caustic process be rendered somewhat painless by mixing strong anodynes with caustics, and if the preparation be so made as not to extend its caustic effects beyond the required area, then in cases where patients have a dread of the knife—and natives as a rule have such dread, as the very name of operation strikes terror into their hearts—in such cases I believe this method in cautious hands would no doubt be advantageous. But whether we can accomplish such a safe application I am not prepared to say, and must leave it to time and experience.

DISCUSSION.

At the conclusion of this paper Dr. H. J. Appu said that he knew of many cases treated with the second method described by Dr. Sanzgiri, and some with a good deal of relief too. An asthmatic patient was relieved for a period of three years, but after that the complaint returned. He had seen a case of bleed-

ing piles even thus relieved. He believed that the application used must have some dessicating action which returned the complaint.

Dr. N. N. Katrak said he thought that medical men generally took a gloomy view of the disease, and gave it more importance than it deserved. Ordinary treatment generally gave good relief, and only in a small percentage of cases radical treatment was necessary. In the majority, however, keeping the bowels open and the piles moist was all that was required. He used a combination of chrysophanic acid and iodoform, which was painless and gave good relief. He thought that the internal piles were generally inoffensive unless they bled or gave rise to pain. For these he used pessaries containing belladonna, chrysophanic acid, and iodoform, which succeeded in most of the cases; otherwise he used hazeline. The caustic treatment used by some Vaids causes most unbearable pains and even sloughing of the anus. He thought the paper opened a field for investigation if the Hakims' plan of treatment of piles could be modified.

Dr. V. S. Trilokekar exhibited a specimen of piles extracted from a friend of his who was supposed to be suffering from piles for six or seven years, but he (Dr. Trilokekar) had his doubts about the diagnosis. However, a Hakim took out the thing he had placed before them, which upon examination was found to contain hyaline cartilage; it was a portion of a bronchial tube. He believed that such things should be exposed to the people at large who were so easily duped. It took him about three or four days to convince his friend—a University graduate—that what the Hakim had extracted was not a pile. He wished to see such communications made public through newspapers.

Dr. Sanzgiri in reply said that his object in reading the paper was, as Dr. Trilokekar had expressed, to bring such practices to the notice of the profession and the public. However, he thought there might be something in the second method of treatment.

Dr. Cowasji Hormusji said that he agreed with Dr. Trilokekar that these things should be exposed to the public, though he thought people would have their own way. He himself had not met with much success with the ordinary mode of treatment with laxatives and gall and opium ointment. But he had seen

more than twenty cases of actual bleeding piles cured by the second plan of treatment described by Dr. Sanzgiri. He had himself recommended this treatment in several cases, and in all of them he had seen complete success.—*Indian Medico-Chir. Journal.*

AMERICAN ASSOCIATION OF OBSTETRICIANS.

APPENDICITIS.

The following is a condensed report of the discussion upon this subject at the above-named Society. The author of the paper, Dr. W. G. Macdonald, of Albany, N. Y., stated that every department of abdominal surgery has its evolutionary period. Out of the great amount of literature, controversial and otherwise, three important landmarks are established:

1. That for all practical purposes all inflammatory processes in the right iliac fossa arise from the vermiform appendix.

2. That practically the vermiform appendix is always intraperitoneal, and that any operation undertaken for appendicitis that does not involve the entering of the peritoneum is false in its surgical conception.

3. That idiopathic peritonitis does not occur. That many cases diagnosticated as such are really cases of perforating appendicitis.

From a careful consideration of pathological conditions and clinical histories, appendicitis may be classified in the following varieties:

1. Acute perforating, fulminating appendicitis with general peritonitis.

2. Acute suppurating appendicitis with local plastic peritonitis and abscess.

3. Subacute appendicitis, variously termed catarrhal, chronic, relapsing or obliterating appendicitis or appendicular colic (Talman).

It is not claimed that pathologically these conditions are absolutely distinct. Quite the contrary is true, but that the type is determined by the amount of bacteriological invasion and the degree of immunity possessed by the patient. That perforation

occurs very much earlier than is commonly believed, can be demonstrated by many clinical histories and early operations. It may mark the onset of the disease. That the prognosis in acute, perforating appendicitis, with or without operation, is always grave; that operations undertaken while perforation is impending, but has not occurred, are followed by fatal results by extension of inflammation in many cases; that acute suppurative appendicitis with local peritonitis presents the most favorable field for operation during the attack, are well demonstrated observations. The removal of the appendix is to be undertaken with great circumspection when it lies in the wall of an abscess cavity.

The third group of cases do not require operation during the first attack, but if repeated attacks occur, operation during quiescence is demanded. Operative results in these cases are most favorable.

Errors in diagnosis are yet common, and arise from two causes; namely, carelessness in treating abdominal diseases without physical examination, and mistaken pathological notions.

The following is such a pithy report that we reproduce it in full:

Dr. Robert T. Morris, New York: I am not inclined to say much this evening on the subject of appendicitis. Most of you are familiar with what I have said and written on the subject from time to time. I would say, however, that I am opposed to and dislike the classification of cases as men classify them to-day. Any man of a scientific turn of mind feels grieved over classifications. Most men who have been trying to classify cases of appendicitis have classified them from their ultimate symptoms. I believe appendicitis is an infective, exudative inflammation of the appendix vermiformis. I believe, furthermore, that classification can be elaborated to the extent of a person's knowledge of the English language, so that eventually the man who is well qualified in the use of this language will have a separate name for each symptom as it appears and can place it as a case of this or that sort. There is no natural elaborate classification of this disease, but simply an artificial one that each man will present for adoption, but it will not be adopted eventually by others because it is artificial.

Mistakes in diagnosis: I think men who are engaged in making diagnoses of appendicitis very seldom made a mistake. I have had occasion, as most of you know, to see a great many cases of this disease, and have removed a good many appendices; and though I do not profess to have more diagnostic acumen than my *confrères*, I yet have been misled in one case of tuberculosis of the appendix, and in another of carcinoma of the appendix in which, a year or two after an attack of typhoid fever, I removed a normal appendix from among adhesions which I believe had been caused by chronic appendicitis. These are the only cases in which I have been deceived, and I think very few men who are accustomed to see these cases will be mistaken except occasionally by a case of tuberculosis or of carcinoma of the appendix, or a case in which we have adhesions from septic disease of the tube or ovary or of other structures.

As to the analysis of foreign bodies, it is quite true we do not find cherry seeds, grape seeds, and various other seeds in the lumen of the appendix. I have had a pretty large collection of specimens carefully examined and analyzed, and I find more frequently than any thing else calculi consisting of calcium phosphate and a little inspissated fecal matter and fat. The proportion of fat was very great in several of the specimens examined. It is rather difficult to account for this proportion of fat, especially as some of the concretions were large, and as the lumen of the appendix was cut off from the lumen of the cecum; it occurred to me that possibly it may be due to retrograde metamorphosis of the lymphoid cells of the appendix. To determine the amount of fat in the lymphoid coats, it was found that the proportion was eight and a fraction per cent. Three appendices were examined with small ulcerating spots, and the proportion was fourteen per cent. of fat. Three others examined in which the anterior coat was ulcerating, and twenty-six per cent. of fat was found, showing the very large amount of fat that was being produced by slow ulceration as a result of retrograde change in the lymphoid cells in the chronic ulcerative cases. In a large proportion of cases we found a slow ulcerative process going on, because the tissues were exposed to putrefactive bacteria, to the bacteria of suppuration, not necessarily in the tissues but in the lumen of the appendix.

With reference to the question as to whether we had better separate adhesions, it had better be determined by the operator himself, who knows the results following his particular technique. Every man in surgery is a law unto himself. If I were to practice drainage as Dr. Price practices it, I could not obtain the results that he does. But, personally, I separate the adhesions in almost every case of appendicitis upon which I operate. I do this in searching for other collections of pus. I do it to separate loops of bowel held in bad position by adhesions which would strangulate the bowel and to prevent re-adhesion in a bad position. I believe that can be done, but it would be unsafe to teach this. I would not dare to teach it, but I would do it myself. I believe it is the correct thing for us to do.

Dr. Joseph Price, of Philadelphia: The remarks of Dr. Morris on appendicitis to which we have just listened are the best I have ever heard, and his closing remarks are quite sufficient. We may all go home without any further discussion of the subject. I agree with him excepting in one point—namely, that he would not dare teach what he would do himself in these cases, and to verify and emphasize that point I will simply allude to the statistics of one of the papers. For instance, in speaking of the separation of adhesions and delivering the appendix, or in alluding to the recurrence of cases, the author gives two fatal cases in twenty. That of itself should be a sufficient argument for surgeons to follow the practice advocated by Dr. Morris of completing all operations, removing the cheesy, disorganized appendix, and breaking up all adhesions. I am sorry Dr. Morris does not stand out and insist upon others doing just what he can and does do so successfully.

Dr. Morris has alluded to foreign bodies, and I am rather inclined to think that the variety of foreign bodies found in the appendix is much greater than is ordinarily supposed. A short time ago a Philadelphia surgeon found a fish-fin in the appendix, and another gentleman found two sugar-coated pills. We know that cases of appendicitis increase about the strawberry and grape season. A few years ago an intelligent gentleman, a man of considerable wealth and leisure, traveled around the world and had twenty-four attacks of the disease in different parts of the world. He was treated by twenty-four or more physicians

and by some declared cured, and in the twenty-fifth attack Dr. Agnew removed the appendix, and the man recovered. I presume Dr. Morris has a goodly number of appendices in bottles that have been reported as cured and are still being reported as such before county, State, and national medical societies. My brother has had fourteen operations for appendicitis without a death. The disease is common. I have operated twice myself in one physician's family.

Dr. A. H. Cordier, Kansas City, Mo.: It is with some little timidity that I rise to participate in this discussion after hearing the able and interesting remarks of Drs. Morris and Price. I have seen a great deal of the work of Dr. Price, and I have done a little of this class of work myself, and must beg leave to differ from them in regard to breaking up adhesions in this locality. I wish to call attention to the fact that there is a great deal of difference between pus found in the appendix and that in the pelvis. If we accept the theory advanced by Dr. Price, that the majority of cases of pelvic suppurative diseases are caused by gonorrhea, we must accept the fact that this is a form of poisoning brought about by the gonococcus of Neisser. It does not invade the peritoneum to the same extent, and it is not as dangerous a micro-organism as the bacillus coli communis. We have a different septic germ in this locality. If we go to work and break up the adhesions in a case of appendicitis that are walled off, we are sure to have a larger mortality than if we simply make an incision, evacuate the pus, clean out the cavity, and introduce rubber drainage in addition to gauze packing. In these cases it is hard to tell when to go ahead and when to stop. In some cases the appendix will float out with the pus at the time of the operation. My results in operating for cases of appendicitis have been extremely satisfactory to me. Where I find them with walled off abscesses, I simply make an incision, evacuate the pus, and drain as in other localities.

I wish to speak now of the symptom—colic. We pay too little attention to colic occurring in the abdomen. A patient presents himself with colic occurring from year to year, and it is more significant than we are disposed to think. Two weeks ago I operated upon a gentleman for appendicitis, who lost a son three months before from this disease without an operation. He

presented a history of having had repeated attacks of colic for eighteen years. He said he had never had an attack of appendicitis to his own knowledge. On the morning of the operation I saw him in consultation with his family physician, with a normal temperature and pulse, but pain in the region of the appendix, this attack differing from previous ones. Appendicitis was diagnosticated, the patient was sent to the hospital, and I operated on him the next day. I evacuted fully a teacupful of pus and found a gangrenous appendix.

In regard to foreign bodies, in one case I found a piece of chewing gum; in another a piece of wax, and in a case from Buffalo, I found a cherry stone which the patient had swallowed a week or ten days before, that had gotten into the appendix. From the moisture and heat it had swollen and torn a hole into the peritoneum.

Dr. J. B. Murphy, Chicago: This battle of appendicitis has been contested all along the line. The first thing we had to defend was the presence of pus in these cases. Almost every general practitioner that you discuss the subject of appendicitis with would say: "There was no pus in my case. The patient got well." Finally, after careful examination at the *post-mortem* table, it is practically agreed that in every case of appendicitis there has been, or there is present, pus. What will be the outcome of that pus? You know the way in which Nature performs so-called cures, or takes care of this disease. Every general practitioner will tell you how many cases he has had with recovery. At a meeting in one of our western cities this summer, a practitioner who lived in a hamlet of two or three hundred inhabitants, had sixty-two recoveries from appendicitis. They were not of the variety that come under my observation.

A word with regard to the pathology. We agree that some cases get well without operative interference. What cases will you, and what cases will you not, operate on? These are two things we want to settle. What shall we do with a man in his first attack of appendicitis? Shall we wait? That is the question. In his first attack, what happens? He has his first symptom either from a perforation, from an invasion with infection of the mucous membrane, which is the most common, or from an obliteration. The outcome of these three things will be all the

pathological conditions that you can possibly imagine almost in the peritoneal cavity. In the early stage, what have you to contend with? By the early stage I mean at the time when the patient has his first symptom. You have a disease at this time that is limited to the cavity of the appendix, while a few days later—many times a few hours—it has no limitations except the peritoneal cavity. What would you do with pus of that dangerous variety anywhere else? Of course, you would cut down, evacuate it, and try to save the life of your patient. When a patient has unmistakable symptoms of appendicitis, not to-morrow, not to-day, but *now* is the accepted time to operate. The symptoms of the disease are more definite and less liable to mislead the surgeon in the early stage than the symptoms of any one affection I know of, excepting pneumonia. We must not delay operative interference until to-morrow, but resort to it at once. Whenever you have a patient with a sudden attack of pain in the abdomen, with nausea and vomiting, increased local tenderness over the seat of the appendix, with perhaps a rise of temperature, you may conclude that you have a case of appendicitis to deal with. There are very few conditions in the abdomen resembling that. Indeed, the exceptions are so few that we can lay down a rule except in diseases of women where there has been a previous history of trouble. Even if you have symptoms on that side of the abdomen in a woman, I think the indications are just as great to operate as in the appendix. As soon as you have the symptoms I have mentioned, you should at once proceed to prepare your patient for an operation. It has been stated that I would operate on such and such a case, but that I *would not* operate on this or that case. Let me say here, that there is no man living who can make a differential diagnosis of the pathological conditions that exist inside the abdomen in appendicitis.

Dr. J. Henry Carstens, Detroit: Dr. Murphy has said nearly every thing I wanted to say. I perfectly agree with what he has said, but I must differ from Drs. Morris and Price with reference to one point. There are cases where there is no earthly need of going down and breaking up adhesions, removing the appendix, and so on. I am fully in accord with Dr. Cordier's remarks, that there is a vast difference between pus from the gonococcus

and that which we get from the bacillus coli communis. That is not the only thing; we have sometimes a streptococcus in there.

I desire to emphasize the point brought out by Dr. Murphy, and for which I have been criticised in my own city, namely, that in the present state of our knowledge we can not always tell whether we have a severe or mild case of appendicitis to deal with. As has been said, ninety-eight times out of every hundred every case of appendicitis ought to be operated on — not to-morrow, not the next day, but this very minute. If this is done, in the future we will not have statistics giving us thirty-one deaths out of fifty cases, but we will have such statistics as Dr. Morris gives, namely, ninety-eight recoveries out of one hundred operations.

Dr. W. E. B. Davis, Birmingham, Ala.: Reference has been made to purulent peritonitis as being dangerous in connection with appendicitis. We are told that the question in regard to the appendix and tubal disease is settled, and now we are to decide what to do with this affection. I think if there is any thing to do, it would be to prevent it. When we get general suppurative peritonitis, it is my opinion that we can do nothing for our patient. We have a local condition of sepsis that will kill the patient, even though we may relieve the general condition; therefore, I think the treatment of purulent peritonitis is preventive. It is the only treatment that we can succeed with. Cases have been reported of suppurative peritonitis; they are not cases of purulent peritonitis, but cases of large abscesses which have ruptured into the cavity, which have been cleaned out before there was peritonitis which could have produced these abscesses in the general cavity.

In regard to breaking up adhesions, I will speak briefly of the treatment of appendicitis. It must be borne in mind that the most dangerous kind of appendicitis, that produces peritonitis in twelve hours, also produces the same condition that we get in stab wounds of the intestines. You all recognize the fact that you can not save these cases unless you operate within the first day. After twenty-four hours there is but little hope for the life of the patient from operative interference, so much so that it is unsafe (if the patient is seen after twenty-four hours)

to operate; in other words, there is no use in operating. The surgeon should take that position in order to sustain his reputation. We must not expect to save many cases of the dangerous form of appendicitis that require our help. Many of the cases that need our help are cases of fulminating appendicitis, in which death comes from obstruction of the bowels. I am sure it has been the experience of all of you, that in the majority of cases in which you are called upon to operate on the bowels, they do not have invagination, but obstruction due to dynamic causes. Paralysis and inflammation of the bowel, not due to obstruction of the bowel from mechanical sources, is not an uncommon thing to meet with. The patients that most need an operation do not call us in time to operate. The cases of appendicitis that we see on the second or third day we can usually save, because the pus is circumscribed. We have the existence of a condition with which the surgeon can deal with the promise of a cure. We ought to operate early, but the fact remains that we can save some of these cases late. The cases that need our services most are the ones we do not see to operate on with any degree of certainty of saving them.

In regard to removing the appendix and breaking up adhesions, I think Drs. Morris and Price have advocated a dangerous practice. They have recommended a system of treatment which will, if adopted, cause many deaths. While it may be successful in careful and skillful hands, in the majority of instances it would be a dangerous procedure. I can conceive of nothing so dangerous as allowing the smallest quantity of this offensive septic pus to escape into the abdomen. In the last year, by gentle manipulation of the abscesses, I have had two secondary abscesses produced by the escape of pus, and the patients came very near dying. If you do not find the appendix by very careful and gentle manipulation, you had better let it alone.

Reference has been made to foreign bodies being very frequent causes of appendicitis at certain times of the year. I think we will find the cause is due more to a catarrhal condition, brought about by eating too much fruit, than from the seeds themselves.

Dr. A. Vander Veer, Albany, N. Y.: I have been very much interested in the remarks that have been made with regard to

appendicitis, as I have done quite a number of operations for this disease. Dr. Peck has placed on record cases that, if we study them carefully, will be of value to us and to him. I have listened to this discussion with a great deal of interest, because I know it will be published in our medical jonrnals and will be taken either one way or the other, as a scientific discussion by men who understand what they are talking about, or else it is to be looked upon as being extreme. We greatly respect the opinion of such men as Drs. Morris and Price, men who are not only scientific in their attainments, but whose results are above that which many of us can reach. As has been remarked by Dr. Davis, I do not believe it is possible to cure septic peritonitis in which we have the bacillus coli communis. We have the perforative and fulminant forms of appendicitis, that go on and are precisely like gunshot or stab wounds. If we could reach these cases early enough, lives might be saved, but how many surgeons reach the patient in time to perform a life-saving operation? These are the cases that we ought to dwell upon and talk more about and instruct the general practitioner, and have him thoroughly educated as to what the symptoms mean.

As to foreign bodies, I do not think this is a matter of so much importance, but fecal concretions are found in a great many cases. I have a number of specimens that I have preserved, but I believe, with Dr. Price, that at certain periods of the year, during the blackberry and grape season, more cases of the disease are liable to occur. The cecum is filled with seeds. It does not hold impacted feces particularly, but it holds foreign substances in such quantity as to produce irritation of the mucous surface of the appendix, and by extension of the irritative or inflammatory process we meet with a greater number of cases at the time of the year when fruit and certain forms of vegetables are eaten with greater freedom. A word about the cases in which we do not find foreign substances, they are cases of the catarrhal form of the disease. In the process that takes place, the patient is in great danger and we may have a simple form of appendicitis or even perforative appendicitis.

As to the time of operating, I am an advocate of early surgical interference, although I have operated on six cases of relapsing appendicitis without a death.

Dr. Chas. A. L. Reed, Cincinnati: I wish to emphasize one point which has been raised incidentally in the papers and in the discussion. The point is illustrative of some recent cases. I will simply mention one or two. I was called to a town in Kentucky, a few miles below Cincinnati, by an intelligent physician to examine a case that presented a classical history of appendicitis. The doctor had been hesitating about the necessity of an operation, although he recognized there was inflammation about the head of the colon. He concluded it was one of those cases the tendency of which is to recover, and the point upon which he deferred operation is the fact that he was unable to discover McBurney's point. There are a great many members of the profession who believe in McBurney's point; they look for it, and they do not call in a surgeon until they think they can find it. I wish to emphasize the fact that this point must not be looked for. There is no occasion to look for it, and the general practitioner who hesitates and searches for this somewhat mysterious and altogether variable symptom of disease is alluring himself and the patient along to a fatal result.

Dr. James F. W. Ross, Toronto: With reference to cases of fulminating gangrenous appendicitis, they all die. Dr. Bryant, in his remarks in Albany last February, distinctly stated that he had never seen a case of what he called fulminating gangrenous appendicitis but that terminated fatally. My own cases have all died, and, for that reason, when they come to me in what I call the second stage, I do not operate on them. I do not think any of us can disagree with Dr. Carstens, that when a patient reaches the third stage in which there is pus walled off, the right thing to do is to let the appendix alone. An operation done in the relapsing stage is not dangerous. I have never lost a case on which I have operated in the relapsing condition. As to immediate operation, advocated by Dr. Murphy, I consider it to be sound doctrine, but here in Toronto, at any rate, we do not see these cases early enough. Dr. Murphy says when we see a man with the classical symptoms of appendicitis we should operate at once, but we do not see them here when these symptoms present themselves.

Dr. L. S. McMurtry, Louisville, Ky.: One can but recognize in the remarks of the several speakers who have preceded me

the marked advance of knowledge in relation to appendicitis. Four or five years ago many eminent surgeons advocated expectant treatment in all cases until general peritonitis was established, and inveighed against operative interference until the last moment. Now the course so forcibly advocated by Dr. Murphy and others in this discussion is generally conceded to be the only safe method of dealing with this murderous disease.

Of the many important practical points discussed, I beg to direct attention to one in particular: It is to the importance of doing, in every case that will permit, a complete operation. We have learned the disastrous results of leaving behind diseased tissues and multiple pockets of pus in suppurative salpingitis, and the same principles should be applied in operating for appendicitis as in salpingitis. There are, of course, cases of appendicitis in which ideal surgery is impossible, and in which we must be content merely to open, evacuate, and drain as an immediate life-saving measure. But in all cases where the patient's strength will permit, a thorough operation should be done. Adhesions should be separated, multiple posterior pockets of pus should be emptied and the appendix removed with free flushing and drainage. I could report in detail numerous cases coming under my own observation, where prolonged illness and secondary operations would have been averted by carrying out this plan thoroughly in the beginning.

Dr. Donald Maclean, Detroit: As to the question of early operation, if I had my patients entirely under my control in the hospital, I certainly would advise and advocate early operative interference. Let us take, for example, a hundred cases in which an early operation is done for appendicitis, and I believe a great many of them would have recovered without an operation, and permanently. I have had quite a number of cases under my observation and the opportunity of watching them. One was a coachman who had an acute severe attack of appendicitis, but was unwilling to have an operation performed. He got well without it. I have watched ever since, and he is well to-day. I could cite many other cases, if necessary. In our practice we have to contend with the opposition of the friends or relatives of the patients regarding surgical interference, and this is a serious matter. It takes a man with a good deal of moral courage to

go into a family and say to a mother or father, "Your lovely daughter of fourteen has got appendicitis and must be operated on at once." It causes the family great sorrow, and sometimes catastrophies of another kind result from it. For instance, in Detroit, a young lady of a prominent family was taken with appendicitis, and so diagnosticated by her physician. He called in a surgeon who advocated immediate operation, which had the effect of horrifying the family to such an extent that my surgical friend and physician were both dismissed from the case. A homeopath was called in, and, sure enough, the case got well.

BOSTON MEDICAL APR 17 1897 LIBRARY

Dr. W. G. Macdonald, Albany: From what I have seen, the operative treatment of appendicitis has been largely confined, among a great many operations, to two classifications, cases of localized abscess with plastic peritonitis, and cases of relapsing appendicitis. Of all cases of relapsing appendicitis upon which I have operated, every one of them has gotten well, and of the other class of cases there is a mortality of 28 per cent. Five of these cases can be attributed to the breaking up of adhesions and establishing a communication between the general peritoneum and this area of the abdomen which has been suffering. I do not believe there is any system by means of which you can make it safe to turn this portion of infected peritoneum into the general peritoneum again, drainage or no drainage, or by any system of drainage.

Dr. Joseph Hoffman, of Philadelphia: Why gonorrheal pus is less irritating than that from the coccus which is supposed to inhabit the colon is beyond my understanding. It is only an effort on the part of some to explain what we can not understand, and the explanation does not go far, for the reason that we can constantly open up these colonic abscesses and they get well. There is no reason why, if the coccus of the colon is more poisonous than any other, one patient should get well and another should not, if there has been an abscess opening into the peritoneum. A case was cited in point.—*Boston Med. and Surg. Jour.*

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. II. LOUISVILLE, JANUARY, 1895. No. 1.

JOSEPH M. MATHEWS, M. D., - - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

RECTAL LITERATURE.

Seventeen years ago the editor of this journal, on his way to Europe, stopped over in the city of New York several weeks for the purpose of looking up what literature he could on the subject of rectal diseases. Outside of one book, edited by an American author, nothing could be found save a few books on the subject published in Europe and a few essays by Americans. Within a stay of three weeks in the great metropolis of the United States he was unable to witness a single operation upon the rectum. Upon his return from abroad he called attention to the scarcity of literature upon this important subject, and at the same time entered upon a specialty, new to the profession, devoted to these diseases. In less than two decades he has seen the specialty thrive until it now ranks in importance to that of any other specialty in the land. In that same metropolis, where he was unable to see a single surgical operation in this department seventeen years ago, is now established a chair for the teaching of this subject in both the great Post-Graduate schools. Likewise in every large city where post-graduate instruction is given similar chairs have been created. Every medical school that is considered abreast of the times has a chair devoted to rectal diseases. In almost every large city in the Union can be found one or more specialists in this line. Every medical journal contains in each issue some article or reference to this

important subject. Some of the most scientific papers contributed to medical literature during the last few years have been in this line. This journal, which was founded just one year ago, contains in its four issues more scientific papers on diseases of the rectum than had been printed for twenty years prior to the establishing of the specialty. The success of the journal, shown by its large subscription list, evidences the fact that the profession at large take a deep interest in the study of these diseases. No longer is the treatment of them left to the charlatan and advertising man, but surgeons and physicians of distinguished ability are giving them their closest attention and recording their observations in the medical press. The day has gone by for temporizing with rectal diseases by prescribing ointments and washes which do no earthly good. It has become recognized at last that the rectum is the seat of painful, annoying, and fatal disease, and that the very best surgical skill and anatomical knowledge is necessary for their relief and cure. Thousands of lives have been saved in these few years by the proper recognition of this important class of disease. The editor would feel obligated to any and all members of the medical profession who will send him the reprints or other published articles relating to these diseases. As in the past year we have published much original matter pertaining to this subject, so we will in the coming year. We point with pride to the first volume of the QUARTERLY, and can only hope that the second will be equal to it in as many learned scientific articles published.

A DEPARTMENT OF PUBLIC HEALTH.

The country is to be congratulated upon the fact that the President's message to Congress recommends a public health department. Through the whole message there is no more important subject considered than this one. Indeed, for the benefit of the people at large it outweighs in importance all other subjects considered in his message. The people may differ

as to free iron and coal, and as to the repeal of the differential duty on sugar; it may be doubted, too, whether the army should be increased in numbers or not, and some might doubt the propriety of extending the coast defenses, but if the health of the nation is to be preserved, no one can doubt that a department of public health should be established. The following is the pointed way in which the President states his opinion on this matter:

"I am entirely convinced that we ought not to be longer without a national board of health or national health officer charged with no other duties than such as pertain to the protection of our country from the invasion of pestilence and disease. This would involve the establishment, by such board or officer, of proper quarantine precautions or the necessary aid and counsel to local authorities on the subject, prompt advice and assistance to local boards of health or health officers in the suppression of contagious diseases, and, in cases where there are no such local boards or officers, the immediate direction by the national board or officer of measures of suppression, constant and authentic information concerning the health of foreign countries and all parts of our own country as related to contagious diseases, and consideration of regulations to be enforced in foreign ports to prevent the introduction of contagion into our cities and the measures which should be adopted to secure their enforcement.

"There seems to be at this time a decided inclination to discuss measures of protection against contagious diseases in international conference with a view of adopting means of mutual assistance. The creation of such a national health establishment would greatly aid our standing in such conferences and improve our opportunities to avail ourselves of their benefits. I earnestly recommend the inauguration of a national board of health or similar national instrumentality, believing the same to be a needed precaution against contagious disease and in the interest of the safety and health of our people."

The farming element of the country was clamorous for a long time that a department of agriculture should be established, and it was only within the last few years that recognition was accorded it. That it was a wise move the whole country now agrees. How much more important is it that a public health

department be established. When one reads in the daily press of the existence of great epidemics prevailing across the water, the danger is made very apparent and we call for assistance and protection from every hand. In times past such scourges as cholera and yellow fever were left alone to devastate our country with no recognized power to stop its onward progress. With a department of public health established, and a secretary of the same in the Cabinet, the country would feel safe, in that a power existed that would enable us to grapple with such terrible monsters. It is well enough to look after the finances, and have an able Secretary of the Treasury; it is important that the Army should be looked after by the Secretary of War; that the Navy should be made a pride to the country, and its head should be, as it is, represented by a great mind. Each and all of these departments that have at their head honored and distinguishsd men deserve to be controlled with the greatest accuracy and precision. To this proposition no one would dissent, and yet, strange to say, the Congress of the United States in the past has hesitated to establish a department of public health. To keep abreast of the times and to be equal to other nations, the time has now come when such action is imperative. We find other nations are continually appointing commissions for the investigations of contagious diseases. Their people must and shall be protected from all such. Money is expended freely and lavishly for the investigation of scientific medical problems, and the result is that thousands upon thousands of lives are saved annually. We do not want to fall behind others in this line of duty, but in every international conference of this kind the United States should be represented and backed by the strong hand of the Government. In the name, then, of science, of mercy, and of justice to the people at large, let a public health department be established. The medical profession of America will unite as one man in thanking the President for his recommendation in this matter. Let every medical journal in the land publish and endorse his views. Quoting the able editor of *The Journal of the American Medical Association*, we would say, "*Let there be created a department of public health.*"

DR. WILLIAM BAILEY,

PRESIDENT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The subject of this sketch, Dr. William Bailey, was born November 4, 1833, near Frankfort, Ky.

The first sixteen years of his life were spent upon a farm, at which time he became a cadet at the Kentucky Military Institute, situated six miles from Frankfort. From this Institute he received the degree of A. B. in 1853, and A. M. in 1854. After his graduation he taught in the Institute for three years, reading medicine in the mean time.

In the fall of 1856 he matriculated at the Medical Department of the University of Louisville, and in the summer of 1857 graduated in medicine from the Kentucky School of Medicine. After a residence of five years in Shelbyville, Ky., where he practiced his profession, he removed to Louisville, attended lectures, and took the degree from the Medical Department of the University of Louisville.

While resident in Shelbyville he was married to Miss Sue H. Owen, September 7, 1859.

In September, 1862, he was made Surgeon to the 9th Kentucky Cavalry Volunteers, and was mustered out in September, 1863, the service of the regiment being one year.

He located in Louisville in the autumn of 1863, and has lived in this city since that time. In 1869 he was elected Professor of Theory and Practice of Medicine in the Kentucky School of Medicine, which chair he held for two years, when the school suspended. He was made Professor of Theory and Practice of Medicine in the Hospital College of Medicine upon its organization, and was President of the Faculty after the death of Dr. E. D. Foree. In 1885 he severed his connection with the Hospital College of Medicine upon his election to the Chair of Materia Medica, Therapeutics, and Public Hygiene in the Medical Department of the University of Louisville, which position he now holds.

He has been identified with most of the local societies, has

been President of the Medico-Chirurgical Society, has been a member of the Kentucky State Medical Society since its reorganization after the war. He was appointed a member of the State Board of Health of Kentucky for six years, and recently was reappointed by Governor Brown for six years. He has contributed often to the medical journals upon various subjects.

He became a member of the American Public Health Association in 1879, and has missed but one meeting in the fifteen years of his membership. At the last meeting of this body, in Montreal, he was unanimously elected its president, and will preside at its next meeting in Denver in October, 1895.

HERBERT WILLIAM ALLINGHAM.

The subject of this sketch, whose likeness appears as a frontispiece in this issue, is thirty-six years of age. During his student days he obtained several prizes, and in 1879 entered St. George's Hospital, London.

He held the position of House Surgeon for one year, and in 1885 passed the examination for the Fellowship of the Royal College of Surgeons of England, but being too young could not receive a degree until 1887.

Following this he held the post of Demonstrator of Anatomy, and after that the position of Surgical Registrar to St. George's Hospital.

At present he is Surgical Tutor at St. George's, and Surgeon to the Great Northern Hospital, and Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum.

Mr. Allingham is the champion of inguinal colotomy, and to him is due the perfection of the operation, as he first mentioned the perfect spur; and also suggested the procedures which prevented the prolapsus of the mucous membrane of the gut.

It is a great pleasure for the editors to have placed before its readers the faces of two such illustrious men as Allingham senior and junior, the former most fittingly appearing in the first number of Volume I, the latter in the first of Volume II.

THE INDEX MEDICUS.

The George S. Davis Medical Publishing House gives notice that after this year the *Index Medicus* will be suspended unless five hundred additional subscribers can be gotten. Its suspension would be a calamity to the medical profession. It is the only publication of the kind in America, and every physician who desires to keep posted in regard to the literature of his profession can not afford to be without it. To those who are in the habit of writing medical articles it is indispensable. The publishers have all the time lost money from its publication, and they now only ask that a sufficient income be had to bear the expense of publishing it. The cost is only ten dollars per year to each subscriber, and five hundred subscriptions will allow the publishers to go on with the work. Certainly the medical profession should come to the rescue and send in their subscriptions to this amount at least.

In the department of correspondence we reproduce a letter from Dr. H. A. Hare, which will speak for itself, and we trust that all of our readers will interest themselves in this important matter, and come forward as subscribers to the *Index Medicus*.

WILLIAM C. WILE, A. M., M. D., L L. D.

One of the great eastern universities has lately conferred upon Dr. William C. Wile, of Danbury, Conn., the title of L L. D. This is a worthy compliment from a very high source upon a physician of distinguished ability. No one in the profession in the United States has labored more earnestly for its advancement than Dr. Wile. His genial nature has made him a friend of thousands in the profession, and we voice the sentiment of all who know him, when we extend to him hearty congratulations for this, his latest distinguished honor. May he live long to serve the profession in the able and dignified way that he does for many years to come.

Necrology.

DR. OLIVER WENDELL HOLMES.

There is in existence an old almanac in which Abiel Holmes wrote opposite the date August 29, 1809, "*son b.*" This son graduated at Harvard in 1829, commenced the study of law, but soon forsook it for medicine. He studied leisurely and broadly, both in this country and in France, and did not become *Doctor* Holmes until 1836. In 1838 he was called to the Chair of Anatomy and Physiology in Dartmouth College, and nine years later was given the same position at Harvard. He held this chair until 1882, when he resigned, having taught thirty-five different classes of medical students.

For an authentic record of the minutiæ of his life we may well await his autobiography. It may hurt the feelings of some theologians and moralists to know that poverty was not a factor in the success of Dr. Holmes. Like the youthful Hilton, Holmes had sufficient means to enable him to pursue a long course of study at his leisure. In the light of cases like these, the opinion is rapidly gaining ground that poverty has killed, stifled, or crippled ninety-nine for every one that she has assisted on the way to success. The genial atmosphere through all his writings is due not only to his own sunny temperament, but also to the fact that fortune dealt kindly with him. When poverty has kicked a man black and blue and exposed him to all manner of indignities, it is often a task provocative of perspiration to be always cheerful and genial.

Almost every thing that Dr. Holmes wrote might be prescribed as an excellent mental medicine. We know and remember him best in his poetry, for its excellence in lighter vein:

> "Quoth Tom, 'Though fair her features be,
> It is her figure pleaseth me.'
> 'What may her *figure* be?' I cried,
> '*One hundred thousand*,' he replied."

But Dr. Holmes wrote the school children of Cincinnati, when they were celebrating his seventy-first birthday, that he pre-

Very truly yours

Oliver Wendell Holmes

ferred to be remembered by *The Chambered Nautilus, The Promise,* and *The Living Temple.* From the last we may quote a stanza that well shows how imaginative activity must be conditioned by one's dominant experience. He is speaking of the brain:

> "Then mark the cloven sphere that holds
> All thought in its mysterious folds;
> That feels sensation's faintest thrill,
> And flashes forth the sovereign will;
> Think on the stormy world that dwells
> Locked in its dim and clustering cells!
> The lightning gleams of power it sheds
> Along its hollow, glossy threads."

In the *Breakfast Table* series the Doctor is inimitable in his humor. Even where he is condemning something vicious or intolerable, the blow is always a kindly one. The switch is almost concealed by the green leaves of humor, which are still clinging to the branch. The following may serve as an illustration:

"I would have a woman as true as death. At the first real lie, which works from the heart outward, she should be tenderly chloroformed into a better world, where she can have an angel for a governor, and feed on strange fruits which shall make her all over again, even to her bones and marrow."

The professor tells us of a theological student who went to tell a poor deformed sick man of his sins. The reply from the sufferer is in Holmes's best vein:

"I have learned to accept meekly what has been allotted to me, but I can not honestly say that I think my sin has been greater than my suffering. I bear the ignorance and the evil-doing of whole generations in my single person. I never drew a breath of air, nor took a step, that was not a punishment for another's fault. I may have had many wrong thoughts, but I can not have done many wrong deeds, for my cage has been a narrow one, and I have paced it alone."

With this we may compare Dr. Holmes's opinion on the belief of some people that a doctor can cure any thing if he is called early enough: "Yes, but *early enough would commonly be two hundred years in advance.*"

The doctor's remarks on a cough are those of an expert specialist:

"Coughs are ungrateful things. You find one out in the cold; you take it up, nurse it, make every thing of it, dress it up warm, give it all sorts of balsams, and other food it likes, and carry it round in your bosom as if it were a minature lap-dog, and by-and-by its little bark grows sharp and savage, and—confound the thing! you find it is a wolf's whelp that you have got there, and he is gnawing in the breast where he has been nestling so long."

When Holmes chooses he can write beautiful prose, more vigorous than that of Ruskin:

"Our brains are seventy-year clocks. The Angel of Life winds them up once for all, then closes the case and gives the key to the Angel of the Resurrection. Tic-tac! tic-tac! go the wheels of thought; our will can not stop them; they can not stop themselves; sleep can not stop them; madness only makes them go faster; death alone can break into the case, and, seizing the ever-swinging pendulum, which we call the heart, silence at last the clicking of the terrible escapement we have carried so long beneath our wrinkled foreheads."

Many of Holmes's sayings are so epigrammatic that they would have been currently quoted had they been uttered in an age when less literature was produced, when we might not have been bewildered by the products of tens of thousands of steam printing presses. Under this epigrammatic head we might instance such sayings as these: "Every real thought on every real subject knocks the wind out of somebody or other." "A man whose opinions are not attacked is beneath contempt." "Controversy equalizes fools and wise men in the same way—and the fools know it." The Indian is "a few instincts on legs flourishing a tomahawk."

Dr. Holmes is not a deeply philosophic writer, and he will be more often read because he is not. It can certainly be no discredit to a willow tree to be told that it is not an oak. There is room in the world for both the willow and the oak. When he says that "The brain-women never interest us like the heart-women," we see that he has not stopped to inquire whether brains and heart are logically exclusive terms; whether a woman might not have both brains and heart, and whether she might not use a large heart more intelligently because of a superior brain. But his power of detecting analogies in matters of social life is some-

thing wonderful. Happening one day to see a woman sweeping the streets with her long train, he asked a friend, "Now, what self-respecting animal will drag its tail in the mud?"

Happily the custom of expressing opinions about authors without reinforcing those opinions with illustrative quotations is on the decline. The fashion is also passing away of saying very much about any author's works when they are readily accessible and sufficiently easily understood for any one to read them and form his own opinions. More time will probably be always spent in talking about Browning than in reading him, but this need not be the case with Holmes.

On an October day when Nature was sinking into an autumnal sleep, that necessary preliminary to a new and more glorious vernal form, the prayer voiced in the singer's favorite poem, *The Living Temple*, was answered:

> "When wasting age and wearying strife
> Have sapped the leaning walls of life,
> When darkness gathers over all,
> And the last tottering pillars fall,
> Take the poor dust thy mercy warms
> And mould it into heavenly forms!"

For the admirable reproduction of a recent photograph of Dr. Holmes we are indebted to the *Indianapolis Medical Journal*, the cut being from the house of Baker-Randolph Lithograph and Engraving Company, of Indianapolis, Ind.

DR. WILLIAM GOODELL.

Dr. William Goodell, the eminent gynecologist, who had been in failing health for the last two years, died at his residence, 1418 Spruce Street, Philadelphia, October 27, 1894, aged sixty-five years.

Dr. Goodell was the son of Rev. William Goodell, D. D., of Holden, Mass., and was born on the island of Malta, while his parents were journeying to Turkey, where his father was engaged in missionary work.

In 1849 he entered Williams College, Massachusetts. Graduating three years later, he came to Philadelphia and continued

his studies at the Jefferson Medical College, and received his diploma in 1854. The same year Dr. Goodell rejoined his father in Constantinople, and there entered upon the practice of his profession. In 1857 he married at Smyrna, Asia Minor, Caroline, daughter of the late Judge Thomas S. Bell, of West Chester, Pa., who survives him. In 1861 he returned to America on account of the unsettled condition of political affairs in Turkey, and, locating in West Chester, there commenced practicing medicine in this country.

Dr. Goodell made a specialty of obstetrics and diseases of women, on the subject of which he was a prolific contributor to the medical journals, and was also the author of "Lessons in Gynecology."

In 1865, on his appointment as Physician in Charge of the Preston Retreat, at Twentieth and Hamilton Streets, he came to reside permanently in this city, and continued to hold this appointment until his health commenced to fail.

In 1870 he was appointed Lecturer on Obstetrics and Diseases of Women of the University of Pennsylvania, and in 1874 Clinical Professor of the University of Diseases of Women and Children. He was also Honorary Professor of Gynecology of the University, and member of the National, State, and County Medical Associations, of the College of Physicians, of the American Philosophical and Pathological Societies, and a correspondent of the Boston Gynecological Society, of the London Obstetrical Society, and of the Imperial Medical Society of Constantinople. *Times and Register.*

Correspondence.

NEW YORK LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

THE AMERICAN OPERATION FOR HEMORRHOIDS; ANESTHESIA BY NITROUS OXIDE AND ETHER; A LONDON OPERATING-ROOM; INGUINAL HERNIA; CARCINOMA RECTI—INGUINAL COLOTOMY; PHELPS' RADICAL CURE OF HERNIA; CARCINOMA COLON; DANGERS OF THE ONE-THREE-QUARTER INCH MURPHY BUTTON; CARCINOMA RECTI—KRASKÉ; TONGUE IN ARTIFICIAL RESPIRATION.

ROYAL INFIRMARY, EDINBURGH.

The fame of this magnificent hospital, with accommodations for seven hundred and fifty patients, has been carried by the thousands of students who daily attend the clinics to all parts of the civilized world. Among the many shining lights of this center of medical teaching Professor Annandale stands one of the brightest.

As your correspondent, the writer was invited to attend a special clinic, and there witnessed what Professor Annandale was pleased to call the "American operation" for inflamed internal hemorrhoids. Patient in the lithotomy position; the anus was not dilated; right-angled clamps were screwed down on each in turn of the four prominent masses drawn down by volsella, the posterior one first, and with the dull cautery were burned off even with the blades of the clamp. The blades were applied transversely to the gut. Commenting on these cases, the operator said that it is best to replace the protruding mass within the anus; if abundant, may cut off and leave without stitching; care not to cut off too much skin, or cicatricial contraction would follow; no dressing was applied; bowels to be moved with castor oil on the fourth morning, a suppository, morphine one half grain given immediately after operation; retention of urine does not occur; chloroform anesthesia administered on a towel; injections of carbolic acid were recommended in cases where no operation

is permitted. The bowels are thoroughly moved on the night before operation, and an enema given one hour before to clean out the rectum.

Guy's Hospital, London.

In producing anesthesia for opening an ischio-rectal abscess Mr. Symonds used nitrous oxide followed by ether. He is very fond of this method, as it is rapid, avoids the long stage of excitement, and requires but two or three minutes to produce complete anesthesia. The quantity of ether used is very small; the after-effects, vomiting, etc., less. He no longer carries the nitrous oxide to the cyanotic stage, but changes to the ether before that condition is present.

Charing Cross Hospital, London.

The operating-room, 20 x 24 feet, with its pretty mosaic floor and enamel brick walls, lighted from a sky-light 12 x 12 feet, affords all that the heart of the operator can desire. A large chandelier of electric lights floods the "pit" so as to make the field of operation as clear as day. The tiers of seats afford ample space for the visitor and students. Large glass receptacles for antiseptic solutions are raised and lowered on pulleys, and can thus be easily refilled. The instruments, in charge of a nurse, are boiled in a fish-kettle in plain water, and placed in glass trays filled with carbolic solution. The nurse hands instruments as needed to the first assistant who passes them over to the operator.

Sponges consist of absorbent cotton, absorbent cotton covered by a single layer of gauze or pads of gauze. These are rendered antiseptic by being wrung out of $\frac{1}{500}$ bichloride or $\frac{1}{20}$ carbolic solution. The nurse in charge seems to have the utmost faith in these solutions, as she handles any thing in the room, then, without washing her hands, returns to wring out more sponges, which are passed to the operator in a porcelain dish. Soiled sponges are thrown into a tray standing on the floor filled with saw-dust, and afterward burned.

The hands of the operator and assistants are cleaned by scrubbing with tincture of green soap and turpentine, then immersed in bichloride. The operator and assistants roll up their shirt sleeves, don a rubber apron and sleeves, but wear no gowns or caps. The assistants are selected in turn from the corps of dressers.

The anesthetic, most frequently ether, is administered by the official anesthetist or under his supervision—Clover's inhaler. In most of the cases too little ether is given, with the patient but partially anesthetized, coughing, choking, or vomiting, and the vain efforts to clean the mouth and throat by the use of the gag and a sponge caused needless anxiety for both operator and administrator. Failure to turn the head on one side, to clear the throat, was only partially overcome by clamping the tongue and pulling it forward.

The field of operation was scrubbed with tincture green soap and turpentine, followed by bichloride and alcohol; rubber sheets and wet towels placed around.

Mr. A. T. Cullum, operating on left inguinal hernia. The usual incision exposed the sac which extended well into the scrotum; sac separated from the cord, drawn up, opened with scissors. The deep epigastric artery was found in close proximity to the sac. Circular ligation of the sac, which was cut off close to the internal ring. With a Boyd's handled needle passed through all the layers of fascia and muscular tendons and Poupart's ligament, silk-worm gut was drawn through and left untied. A few sutures of silk-worm gut were then used to close the internal ring, and another row to approximate the pillars and fascia of the external oblique. These were all tied and left buried. The cord was left in its usual situation, a horse hair, loop-stitch, closed the skin wound, over which a strip of iodoform gauze was laid and sealed with collodion. Absorbent cotton impregnated with bichloride and zinc outside, fastened with gauze bandages. "If suppuration does not take place the dressing will not be changed until the eighth day, when the stitches will be removed."

Mr. Cullum, two days later, presented a man suffering from hemorrhoids, ulceration of the rectum, and incontinence of feces. Digital examination reveals a growth which extends well above the tip of the finger, and involves the bladder and prostate. Diagnis: Carcinoma. A four-inch incision made on the left side between the umbilicus and the anterior superior spine, the peritoneum opened on a grooved director, and the colon pulled into the opening. The skin and peritoneal edges sewn together. A needle threaded with silk was then passed through the whole thickness of the abdominal wound at its upper angle, then through the

meso-colon, under the colon, and out through the whole thickness of the abdominal wall. The same maneuver was repeated at the lower angle. The ends projecting on the same side were then tied together on both sides, leaving the whole lumen of the gut protruding above the skin level. Fine sutures united the gut and skin together, and a tension suture was passed through the most prominent part of the gut as a guide. In order to prevent prolapsus, the colon was well drawn down before any sutures were introduced. Lister's oil-silk protective was applied directly over the wound, and covered with gauze and cotton infiltrated with the double chloride of zinc and mercury. After adjusting a flannel bandage, several strips of one inch wide elastic were drawn tense over the most prominent portion of the dressing in order to maintain uniform pressure.

Surgical Section, Academy of Medicine.

Dr. Phelps (A. M.) exhibited a patient on whom he had operated for a "straight" hernia of large size, so large that the hand could easily be passed into the abdominal cavity, by his matrass method some seven months ago. (Mathews' Medical Quarterly, Vol. 1, p. 291, 1894.) The mass of wire can be distinctly felt in the abdominal wall. Owing to the knotting of the wire about every half inch before introduction, it does not work loose, and becomes encysted. The method is only applicable to severe cases of hernia.

At the November 12th session Dr. Lilienthal presented a man on whom he had resected the transverse colon. (Mathews' Medical Quarterly, Vol. 1, p. 616.) He has gained over twenty pounds and is in excellent health.

Dr. Lilienthal also reported a case on which he used the one-three-quarter inch Murphy button to remedy a fecal fistula in the right iliac fossa. The distal end of the colon was very much atrophied and some difficulty was experienced in inserting the button, owing to its large size. The patient did well for a few days, but died on the tenth day, having had but little fever and some vomiting. Autopsy revealed gangrene of the gut, the button having ulcerated out.

A second case of resection of the sigmoid flexure colon, in which the same size button was used, was followed by success.

In order that the button could be controlled, a strip of iodoform gauze was carried through the central opening and out the anus.

Dr. Meyer (Willy) thought the last patient fortunate in his recovery, as the large size of the button seems to him to be a source of danger. He called attention to the necessity of a careful study of the details of Murphy's papers.

Dr. Van Arsdale referred to a case of gastro-enterostomy with the Murphy button, in which the necropsy showed no peritonitis or gangrene. The patient seemed to die of inanition.

The acting chairman, Dr. Van Arsdale, presented S. M., aged fifty-four, Russian, on whom he had operated on for carcinoma recti, on June 20, 1892. Incision in median line from anus to sacrum; coccyx and lower segment of sacrum amputated; rectum separated for a distance of six inches, ligated and cut off; rectal wall drawn down, sutured posteriorly to anus; wound packed in front with iodoform gauze, behind with plain gauze. On July 18th free end of rectum drawn down and stitched to edge of skin (anteriorly) by silk sutures. August 21st, small space posteriorly curetted and brought together by deep and superficial sutures. September 11th, discharged, with some pain in lower part of sacrum; almost complete control of bowels—not of gas. Subsequently several smaller operations were done, with cauterization of small prolapse of mucous membrane. On two different occasions small tumors were removed from mucous membrane of rectum, papilloma. March 5, 1894, two pea-sized nodules removed from rectal mucous membrane, carcinoma. Since original operation his general health has been excellent, he has fair control of bowels, unless they are liquid; no prolapse; no stricture; some neuralgic pain, especially at night, in attacks, for which nothing but the cicatrix can account.

New York County Association.

At a recent meeting this association was honored by the presence of Professor Hare, of Philadelphia, who read a paper on "The Tongue in Artificial Respiration." He maintains that the tongue must be drawn directly forward and upward to elevate the epiglottis, and not curved downward over the lower teeth. Having removed the brain and a portion of the base of the skull in front of the foramen magnum on a cadaver, he demonstrated

a method which he claims will carry the tongue forward and the epiglottis upward, and relieve the apnea or stertorous breathing, for the entrance of air into the lungs. With a hand on each side the head is pulled upward and forward in a line parallel with the body, the fingers pressing on the angles of the lower jaw project it forward, and at the same time the thumbs placed on each side near the symphysis menti depress the chin toward the sternum. Looking from above through the opening in the base of the skull the base of the tongue is seen to advance forward, drawing with it the epiglottis, leaving the pharynx and trachea free from obstruction.

Editors Mathews' Medical Quarterly:

I have learned that the *Index Medicus* will cease to be published with the February number, owing to lack of support and the fact that a large number of its subscribers are delinquent, unless an effort is made to continue it.

The value of this publication to those who do any work at all in connection with medical literature is so great that I take the liberty of writing to you to express the hope that you will urge your professional friends to become subscribers.

It is particularly necessary that the *Index Medicus* should be continued, owing to the fact that after the completion of the supplementary volume of the Index Medicus Catalogue of the Surgeon General's Library there will be no record of contemporary medical literature, and he who desires to keep pace with it, or who wishes to study a particular subject, will have to resort to the laborious task of seeking in various journals that which he desires if the publication of the *Index Medicus* ceases.

It will be possible to continue the *Index Medicus* if five hundred new subscribers are obtained. The subscription price is $10 per annum, which should be sent to Mr. George S. Davis, publisher of the *Index Medicus*, Box 470, Detroit, Michigan.

As the *Index Medicus* can never be made a success from a commercial point of view because of the peculiar scope of its work, I have no hesitancy in making you acquainted with these facts, and I earnestly hope that you will insert a notice emphasizing the importance of this matter in the columns of your valuable journal. Yours truly, H. A. HARE, M. D.

Philadelphia, December 3, 1894.

A Word to the Busy Doctor.

THE subject under discussion in the last issue of the QUARTERLY was "The Use of the Elastic Ligature in Fistula in Ano." After showing its so-called advantages, and discussing its disadvantages, I claimed that the knife is far preferable to the ligature in the majority if not all cases of fistula in ano. I now desire to contrast the two methods, namely, the knife and ligature; or, rather, to show the advantages of the knife over the ligature in these cases. First, it can be claimed that with the knife we do a more aseptic operation. When we consider the fact that a ligature is passed through the channel and then secured tightly, and that this of itself must do the cutting, or complete the operation, it can be easily seen that it will take from two to four weeks to accomplish this. During all this time pus is discharging from the wounds and it is impossible to thoroughly cleanse them. In this day of modern surgery, and the surgeon well knows the dangers of pus, he can hardly be called a good surgeon who would attempt such an operation.

SECONDLY, granting that there is no danger or unsurgical thing accompanying the use of the ligature, the time that it takes to cut through the tissue is a great consideration against its use. By the knife the tissue held upon the grooved director is divided in one second, versus two or three weeks' time which the ligature requires to do the same work.

IT may be claimed that the wound behind the ligature is healing during the cutting of the same through the tissue. Even granting that this to a certain extent is true, the parts are concealed and it can not be told whether they are pursuing the right course or not. When the knife is used surgical cleanliness and antiseptic precautions can be practiced all along the route.

The most important consideration, however, in favor of the knife is that all additional sinuses can be laid open, the edges or flaps of the wound trimmed off, the bottom of the channel divided, which are all important surgical procedures. In addition to this the wound may be entirely healed, or at least nearly so, after the use of the knife by the time the ligatures would have cut through. To snm up, it might be said that the operation for fistula in ano is a surgical procedure, and that the use of the ligature is an unsurgical one.

In this connection I desire to make mention of the use of an instrument devised by me, and known as Mathews' Fistulatome. In a brief way I will contrast it with the ligature as a means of operating for fistula. I say with the ligature, not with the knife, as I believe the latter is the best method employed for this disease. The fistulatome is an instrument about eight inches long, and in size not much larger than a small grooved director. At its distal end two small knives are concealed. This can easily be introduced into and along the tract of a fistulous sinus. When at the proper depth, by turning a screw at the other end, the knives are slowly pushed out in the same manner as the one knife in Otis' urethrotome. Then the instrument is carefully withdrawn, cutting through *both* sides of the tract. The operation is practically painless and bloodless. It is designed especially, and only, for fistulæ that have only a single tract. Of course the question might be raised here, how do we know that only one tract exists? I would answer the question by asking another, the significance of the same being understood when I say that I am comparing the fistulatome to the ligature. The question is, in the use of the ligature how are we to know that only *one* tract exists? Therefore just to this point I would say that it stands equal to the ligature, for in the use of neither can it definitely be said that we are dealing with but one sinus.

But, to answer the question more intelligently, I would say that I divide fistula in ano into *progressive* and *non-progressive* kinds, ignoring the division of complete, external, and internal

varieties. If a fistula has existed for some time with scarcely any discharge of pus therefrom, showing no disposition to invade the adjacent tissues, we are dealing with a *non-progressive* type and likely only one sinus. If more than one abscess has appeared at the same site or in proximity to it, if pus is a feature of the disease, then we have to deal with the *progressive* type, and not only cavities are found but numerous channels.

I SAY then, if we are supposing that only one channel exists, the fistulatome has the following advantages over the ligature, namely: It is clean, therefore aseptic, making a clear cut, which is concealed and not exposed to the air after dressing. Second, it is, as has been intimated, painless and nearly bloodless. Third, it divides both sides of the sinus when only one side is divided by the use of the ligature, the *bottom* of the fistula being left in the same condition as when the ligature was inserted. Fourth, the sphincter muscle is not interfered with at all, as is done by the ligature, therefore no incontinence is to be feared. Fifth, any little pain that might accompany the use of the fistulatome lasts only a moment, while in the case of the ligature operation some pain is experienced during the whole time that it takes the ligature to cut through. I submit that these are plausible advantages that can be claimed for the fistulatome over the ligature. I desire, however, to say that the cases wherein either the ligature or fistulatome should be used are few and far between.

I DESIRE to say in conclusion that any one who thinks that it is a very easy matter to eradicate and cure fistula in ano will be often mistaken. The more that I have to deal with this special rectal affection, the more I am convinced that it is the most difficult of all affections to cure. Each case of the kind is an individual one that should be carefully scrutinized. The text-books give one a very faint idea of the correct way to operate for fistula. If the directions as are usually found in such books were followed, I am sure that not one half of these cases that present would be cured.

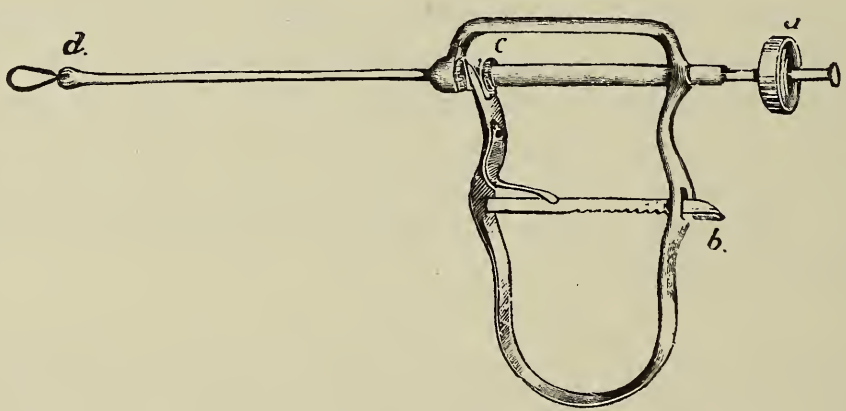
With Our Exchanges.

DISEASES OF THE RECTUM.

KELLOGG, J. H., BATTLE CREEK, MICH.: A NEW METHOD OF OPERATING FOR HEMORRHOIDS. (*Leonard's Illustrated Quarterly.*)

Since the traveling pile doctor demonstrated the possibility of curing hemorrhoids by other means than the ligature, and other remedies in vogue previous to the last dozen years, a great variety of methods of dealing with this little dangerous but troublesome condition have been proposed. I have investigated all of the proposed methods, and have made a practical trial of most of them, and finally have adopted a method which, so far as I know, is essentially novel, although not wholly new in principle.

This method, which I have employed for the last two years, requires the use of a special instrument, which I have termed a hemorrhoidal snare, the construction of which is shown in the



accompanying cut. The instrument was made for me by Geo. Tieman & Co., of New York, after designs which I furnished them. It can, of course, be used for other purposes than operation for hemorrhoids, and since it has some novel features, the following brief description may be of interest.

The instrument consists of the following parts:

(*a*) A rod with screw head at one end carrying a nut, and perforated at the other end to receive loop of wire.

(*b*) Handle of spring steel, one blade of which is free to move when the handle is pressed, the position of the movable blade being retained by a ratchet.

(*c*) An actuating sleeve, one end of which, when in use, rests firmly against the nut, the other end being forced back by the movable handle, thereby forcing back the rod.

(*d*) A canula into which the wire loop is partly drawn after having been threaded through the rod, after the plan of Sajous' snare.

In use, a piece of No. 5 unannealed piano wire about two and one half inches in length is looped into the rod, which projects just beyond the end of the canula when the nut is screwed out as far as possible. By a few turns of the nut the rod is drawn in so that the ends of the wire loop are hidden within the canula. The instrument is then ready for use.

The instrument can be made of any size, adapted for an ear, nasal, or throat snare. The rod is easily withdrawn for cleaning purposes. I find the instrument very convenient for any purpose for which a snare is useful.

In the use of the instrument a pair of forceps is put through the loop; with this the hemorrhoid is seized and drawn into the loop, which is at the same time pressed well down around the base of the hemorrhoid. By compression of the handles of the instrument the loop is drawn into the canula sufficiently to constrict the hemorrhoid. If necessary, one or two extra turns are given to the nut to tighten the loop still further. Dropping the snare, the forceps, still holding the hemorrhoid, are grasped with the left hand, and the hemorrhoid is seared off by means of a small Paquelin cautery point or a galvano-cautery knife held in the right hand. Care must be taken that the heat employed is not too great. My custom is to sear the hemorrhoid off at a black or low red heat, and then hold the cautery in contact with the stump long enough to dry it somewhat. As soon as the operation is completed the rachet is released, the bar carrying the loop of wire pushed back into the instrument, and all is in readiness for attacking another hemorrhoid.

In the case of large hemorrhoids I formerly sometimes observed slight searing of the surrounding tissues, due to the heat of the cautery, and sometimes the metal speculum would become

unpleasantly heated, but this difficulty is entirely obviated, even without the use of an ivory shield, by having an assistant maintain a stream of air upon the field of operation by means of a pair of hand-bellows, or preferably a pair of blow-pipe bellows. This not only keeps the tissues cool, but at the same time keeps the field of operation wholly free from the smoke arising from the burned tissues. The operation in ordinary cases is accomplished so quickly that this is entirely unnecessary, but I mention it as a means of enhancing somewhat, in some cases, the comfort of the patient after the operation, and the convenience of the surgeon doing it.

This mode of operation has the following advantages over most others:

1. It is extremely expeditious, only as many seconds being required as the old method of ligature required minutes.

2. It is aseptic. Nothing is left behind to decompose and give rise to absorption of septic matters, as is the case when the method of ligature is employed.

3. The results of the operation are under perfect control. Whether the method of ligature or injection of carbolic acid or other liquids is employed, the resulting inflammation may extend much farther than is desired. I have known several cases in which phlebitis resulted, and in some instances worse consequences, from both methods.

4. As dilatation of the sphincter is not required in this method, internal hemorrhoids may be removed without the use of chloroform or ether, the operation being practically painless. It is only necessary to inject a small amount of cocaine into the tissues before applying the snare to render the operation so nearly painless that even a very sensitive patient will undergo it with very little complaint.

5. Suffering after the operation is very much less than after any other method which I have ever tried, and the recovery much more rapid.

6. There is no danger of secondary hemorrhage, as after the use of the galvano-cautery snare, since the cauterization of the stump is very much more thorough than is possible when a heated wire is employed.

Any one who will make a fair trial of this method will, I am

sure, be pleased with it, as it renders the operation much quicker and easier than with any of the clumsy forms of clamps which have been used in connection with the cautery in the removal of hemorrhoids. After using this method in nearly two hundred cases, I would not willingly go back to any of the old methods. I invariably operate with an Allingham's speculum, which I have modified by the addition of a convenient handle, and a fenestrated slide.

STEWART, R. W.: FISSURES AND ULCERS OF THE RECTUM. (*Pittsburgh Medical Review.*)

There is one class of diseases that seems to be generally tabooed by medical men in their discussion, yet it is one of the most distressing and painful of all, and that is the painful ulcer or fissure of the rectum or anus. The routine treatment of these painful affections, based on the theory that the pain is caused by a nerve-ending being caught and pinched in a cicatricial tissue, has been to put the patient in bed and use forcible stretching of the sphincter. On the theory, however, that the pain is due to the nerve filaments being exposed at the bottom of the ulcer, just as in ulcerations of the skin, I have of late made use of an old but neglected procedure with most satisfactory results—that is, making application of the solid stick nitrate of silver to the surface of the ulcer. The pain is severe, of course, but does not last long, and the results as compared with the method by stretching with its attendant paralysis of the sphincter ani and the confinement in bed have been so satisfactory that of late I have rarely used any other treatment. In five cases lately so treated by me the results have been most satisfactory, the pain of the application has lasted but a few hours, and the relief has been complete. As I have said, this is an old form of treatment for these affections, but is one worthy of our attention.

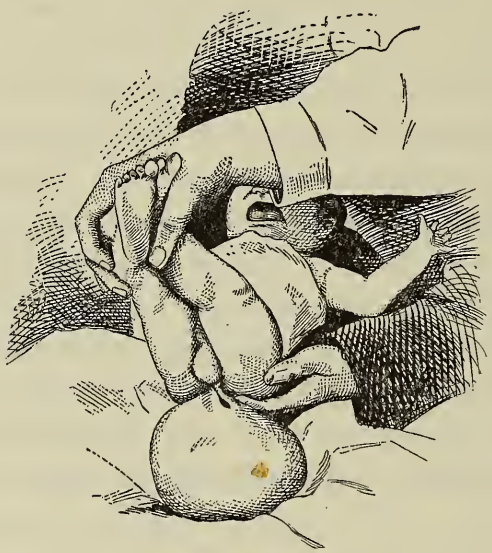
TAYLOR, H. M., RICHMOND, VA.: DERMOID TUMORS. (*Richmond Journal of Practice.*)

Dermoids of the rectum belong to the variety of tubulo-dermoids. "In the early embryo the central canal of the spinal cord and the alimentary canal are continuous around the caudal extremity of the notochord. There is a segment of intestine

extending behind the anus, and named the post-anal gut." We have post-rectal dermoids and rectal dermoids, which may encroach upon the pelvis.

The peculiarity of the contents of the dermoid cysts is interesting; the hair in the sequestration dermoid is usually short, that of the ovarian and rectal dermoid is longer. Teeth not infrequently occur in the rectal and post-rectal variety.

The specimen presented was removed from the post-anal region of an infant, and belongs to the tubulo-dermoid variety. Its attachment was behind the anus in the coccygeal region; the rectum was not involved in any way. The attachment was as broad



as three fingers and about as thick. The large superficial veins everywhere seen in the tumor indicated its rapid growth, its vascularity and the importance of guarding against hemorrhage. To secure the latter end an elastic ligature was applied to the pedicle, which controlled the hemorrhage during the removal of the tumor very well. Five or six large, bleeding arteries needing ligation were tied, and at one point the capillary oozing called for the ligation *en masse* of a piece of semi-cartilaginous tissue. Some time during the night following fatal reactionary hemorrhage occurred, as the family physician was not summoned until the following day.

A dissection of the tumor showed it to be cystic in character; the cysts were filled with a thin, ropy mucus and lined with mucous membrane. It contained no hair or teeth, but an island of

bone. A tuft of hair grew from a patch on the outside of the tumor; the hair was not long, as is often the case, but it was about as long and as thick as that on the scalp of a new-born baby.

The treatment of the large dermoids occurring in the coccygeal region is usually unsatisfactory. Many die before delivery, or while being born. While operations have become successful in a good number of cases, the danger incident to hemorrhage and shock is very great.

TRINKER: THE OPERATIVE TREATMENT OF HEMORRHOIDS. (*Centralbl. f. Chir.; British Medical Journal.*)

The author describes a method he has practiced with much success in the operative treatment of internal piles. He dilates the anus, and then treats the swellings by ligature and the application of the actual cautery. The final step, to which he attaches great importance, is free division of the internal sphincter. This practice, he states, is in accordance with the important rule in surgery that wounded parts ought to be kept at rest. Moreover, it allows a strict antiseptic treatment, as it enables the patient to tolerate, without suffering any pain, the presence of a large plug of iodoform gauze in the rectum. Incision of the sphincter is very beneficial in cases of hemorrhoids complicated by prolapsus ani. The patient is no longer able to force down the rectal mucous membrane, and the rest afforded to the lower part of the rectum by this operation helps to restore the normal circulation of the bowel and anus, and favors involution of the hypertrophied circular and longitudinal muscular fibers.

GASTRO-INTESTINAL DISEASE.

Howitt, Henry, Guelph, Ont.: Surgical Treatment of Intussusception in the Infant. (*Annals of Gynecology and Pediatry.*)

Intussusception plays an important rôle at all periods of life in the causation of intestinal obstruction, and more instances of the malady are overlooked in early infancy than at any other age.

The death-rate in infants during the nursing epoch of life is not materially affected by mechanical distension of gas, air, or liquids. This is because in infants the process is so acute, that in a few hours the edema prevents the treatment from being a success. Invaginations are either ileo-colic or ileo-cecal, and it is impossible to differentiate these varieties during life.

In the whole line of modern surgery, with its vast strides on the road to light, there are few human ailments which demand more prompt surgical aid than do the majority of these cases; and, under favorable circumstances, there is little valid reason why in competent hands the mortality should be greater than the average major operation. Moreover, the operation is an ideal one, being restorative and free from mutilation, and its successful accomplishment fulfills two of the noblest aims of our profession—the alleviation of pain and the prolongation of the sum of human life.

It is important to note the sudden and severe nature of the initial symptom, and that the lump can not always be detected. The diagnosis in infancy is not difficult for the reason that obstruction of the bowel from any other cause is extremely uncommon, and when it does exist is sure to be owing to congenital defects or as readily recognized ailments.

The sudden and pronounced nature of the onset, the presence of more or less evidence of shock, followed shortly by vomiting, paroxysmal colic and marked tenesmic efforts, which give rise to non-fecal passages of blood and slime in a child previously healthy, or who has a catarrhal affection of the bowel, render the diagnosis for all practical purposes complete. If in addition to these we can detect an oval tumor in the line of colon no room for

doubt is possible. In consequence of the pliable condition of abdominal walls at this early age, a lump the size of a pigeon egg can, in the absence of tympanites, be readily felt by the educated hand.

The operation should be performed early, and not when the powers of life are ebbing away. Within twenty-four hours of the commencement of attack, and in the absence of marked tympanites, an attempt at reduction under chloroform should probably be made by distension and taxis; but this trial should be neither forcible, prolonged, nor repeated, and, failing, an abdominal section should immediately follow. In the second day and later the operation should be done without a moment's unnecessary delay. The operator should have a practical knowledge of the details of aseptic surgery as applied to abdominal work.

The incision should be made in the median line, either above the umbilicus or lower, according to position of lump. When the tumor can not be defined, let the middle of the incision be at the umbilicus, for through this the part after evisceration, no matter where situated, may be reached and brought into view. The wound need not be more than from three to three and a half inches in length. The pliable nature of the abdominal walls and the smallness of cavity render complete exploration with fingers quite easy.

Evisceration will be found not only to save time, but to aid very much in facilitating the after-steps of the operation, for it allows more room and permits the large bowel to be readily brought out. I differ from those who state that it is more dangerous to expose the intestines in infancy than later in life. The eviscerated contents of abdomen should be protected by suitable cloths wrung out of hot water and applied in layers, the outer of which are changed when necessary, or the heat maintained by irrigation with water at a temperature of 92°.

Reduction is probably best accomplished by making pressure on the apex of the intussusceptum, while at the same time the intussuscipiens are pulled in an opposite direction. In some instances it is better to break with a probe or other instrument the adhesions at neck, and then to make firm pressure on the intussusceptum by grasping the whole mass with the hand before an endeavor is made to reduce it.

Before the reduced portion is returned to abdomen the operator should not only demonstrate that the obstruction has been completely removed, but should also empty the contents of ileum into large bowel. The last may easily be done by gently stroking the ileum downward with a soft sponge, or after the fashion adopted in my operations. The removal of the material from above the place where the obstruction existed performs important work for an organ, the function of which is sadly impaired; and it also greatly hastens the expulsion of offensive and septic matter from the body.

The replacement of the small intestines may be facilitated by the surgeon and assistant hooking two fingers of their left hands into opposite sides of the wound, and then lifting the lower portion of body from the table. Should the intestines be unusually distended with gas, it is my opinion that there is no objection to multiplying punctures with clean hypodermic needles.

A point which also applies to most abdominal operations is re-arrangement of omentum. By spreading the omentum over the bowels it certainly prevents adhesion of the gut to the line of incision. The lymphatics of it are admitted to be endowed with more than ordinary power of absorption, and by extending to seat of impairment may in no small measure prevent trouble. The omentum may also haply become attached to a weak point on the affected portion of the bowel, and thus be an agent in preventing perforation.

The wound should be sealed in such a manner that the urine of the child can not possibly reach it.

In conclusion, allow me to add that, in all, six cases of intussusception have come under my personal observation, four in the infant and two in the adult. Three were treated by abdominal section and recovered, and three by non-operative means, with one result—death.

Daniel, Jas.: Appendicular Abscess Burst into Abdominal Cavity during Examination; Operation; Recovery. (*British Medical Journal.*)

M. W., aged twenty-seven, first came under my care about ten months ago. She complained of a severe pain in the right iliac region, accompanied with vomiting, constipation, and fever. It

had commenced about three days previous and was gradually getting worse. Purgatives instead of relieving had rather increased the pain.

On examination there was a distinct circumscribed swelling, very painful, but no distinct center of softening that would lead me to suspect suppuration, and she had no rigors. I therefore suggested the application of six leeches and hot fomentations, and gave her a saline mixture with large doses of belladonna internally and a one fourth grain of morphine hypodermically. The next morning she was much better, the bowels had acted copiously, and in three or four days she appeared quite well again.

Two months after she had a similar attack, the same treatment was adopted, and she appeared to get quite well again. Since then she has had several other attacks, coming on after intervals of three or four weeks. After the fourth attack I suggested operation, which she declined, and consulted another practitioner. The last attack had commenced while she was away at Blackpool, and had lasted for three weeks without any material improvement. Her doctor told her she had better get home, as he had done all he could do, and that it might require an operation.

On April 7th, the day after her return from Blackpool, I was called in to see her; she was then suffering severe pain in the right iliac region, constipation, rigors, hectic, and great emaciation. The swelling which I first saw had considerably increased in size, and was distinctly fluctuating; and, while examining it, to be sure of my diagnosis, I felt it suddenly give way under my fingers; the patient felt it also, and fainted. After coming round she said she felt relieved. I explained to her friends the nature of the case, and they sanctioned my operating. On opening the abdomen the pus welled up through the incision as I made it. The whole of the intestine was soaked in pus. I washed out the abdomen freely, first with warm water and then with a saline solution, sponged out the abscess cavity, and dusted well with iodoform. The cecum and colon were matted together, and the appendix could not be found. I made a counter-opening over the abscess, and put in a drainage-tube, and dressed antiseptically. The same evening she expressed herself as feeling very comfortable; there had been no vomiting; temperature 102°,

pulse 108. Next morning I removed the dressing from over the drainage-tube, and soaked out of the tube about two teaspoonfuls of fluid with pus. On the second day there was scarcely any fluid in the tube, and the patient was still feeling better; temperature 100°, pulse 96. On the third day there was no fluid in the tube, which felt firmly fixed on account of the cavity contracting, so I removed it, and dressed antiseptically. The wound continued to discharge for three or four days, and eventually healed up. The abdominal incision never gave any trouble. The woman is now wearing a belt, and is gaining flesh rapidly.

I think this case illustrates another instance of the dangers of delay, and, had it not been for my prompt action, the case might have turned out much more seriously.

De Garmo, W. B., New York: Hernia in Children. (*The Post-Graduate.*)

The author describes the treatment as follows: The knife is seldom needed in the cure of hernia of early life. There may be reasons in some cases when it is better to obtain a cure in two or three weeks by operation, rather than have the child wear a truss for one or two years. If, however, the the matter is honestly placed before the parents, it will be found that in almost every instance they would prefer bringing the child regularly to the physician for a year or more, until cured, to having the operation.

These are tempting cases to the overambitious young surgeon, as almost any operation is followed by cure.

Mechanical treatment can be begun at any time after the child is ten days or two weeks old, the earlier the better. It is an erroneous and unfortunately common idea that children will "outgrow" this defect.

Within my experience, there is no bandage or makeshift of any description that will take the place, either for comfort or efficiency, of a carefully applied truss containing a metallic spring.

What style of truss, of the many on the market, shall we select, for there are many good ones and many bad ones? I would condemn all infant trusses that are made to apply from the same side of the rupture—this includes all German or French styles; also all of those whose pad is placed upon a descending arm at a

level lower than the pelvic spring, and all trusses cushioned or padded with soft material.

The springs should be so tempered that they may be bent to the exact shape of the child's body, and the entire truss should be impervious to moisture that it may be frequently washed.

The more simple it is in construction the better. For the treatment of single inguinal hernia in childhood, the spring, which from the pad crosses the front of the abdomen, passes around the hip of the opposite side and across the back, is one of the most valuable appliances that can be used. It can be found in almost every drug store in the land. Covered either with hard rubber or celluloid, it is known in the trade as a "cross-body" truss. The celluloid have the advantage of being readily shaped without heating the spring, but are not as durable as those covered with rubber. Both are excellent trusses.

In my private practice and clinic I have used for several years a German silver spring, made on the "Hood" pattern, which has given me great satisfaction. A similar truss has been made with celluloid covering, and is known to the trade as the celluloid Hood truss.

The measure for selecting the size of the truss should begin just above where the hernia is seen (that is, over the internal ring), and pass around the hips midway between the crest of the ilium and the trochanter major to point of starting, giving the circumference in number of inches.

The method of taking the shape by means of a strip of sheet lead as taught by me for many years is a great aid. It consists of securing a tracing on paper of the exact shape of the hips at the point covered by the truss spring. A piece of sheet lead one-sixteenth of an inch thick, about half an inch wide, and long enough to go at least two thirds around the child, is used for this purpose. Place one end of the lead over the inguinal canal, with the strip resting across the abdomen. Mold the lead to the shape of the abdomen and pass it around the hip opposite to the hernia and across the back. Press the lead to the exact shape of the hip and back, and then slip it off, place on a sheet of paper and make a tracing of its inner surface with a pencil. The shape of the other hip may be taken in the same way, giving an approximatively correct diagram of the pelvis. In shaping the spring this

diagram is used instead of the child. If a spring covered with hard rubber is used it should be passed through a flame of a spirit-lamp until it is quite warm, and it can then be bent to any shape required. In locating the truss pad see that its lower edge does not come below the external ring. Its pressure should be well over the *internal ring.*

Rodgers, B. W., Oakland, Cal.: A few Points on Appendicitis. (*Occidental Medical Times.*)

1. So-called inflammation of the small intestines is a condition almost always associated with appendicitis.

2. Recurrent cases of appendicitis can be termed proper for operation, especially when severe, and should be operated upon between the attacks when possible.

3. Cases of a tubercular type frequently recur, and should always be operated upon.

4. In every acute case, where the condition grows worse within twenty-four to thirty-six hours, surgical interference should be prompt.

5. Appendicitis is strictly a surgical disease and should always be treated as such.

6. Cases should be seen several times a day, as obstruction may take place, and important symptoms arise in one or two hours.

7. We should never mask the symptoms by giving too much opium, as it may lead us to think the inflammation is under control, when it is really progressing rapidly.

8. Probably 90 or 95 per cent. of the diseases about the cecal region originate in the appendix.

9. All cases of acute appendicular perforation should be operated on, as well as all cases where we are reasonably certain pus is present.

10. Nearly every case of perforation of the appendix which is accompanied by diffuse peritonitis is fatal.

11. Pain is felt in the right iliac fossa in about one half of the cases, and the other half feel the pain in the abdominal cavity, not localized.

12. Appendicitis in children usually progresses very rapidly and is very fatal; therefore operative interference should be prompt, as soon as a positive diagnosis can be made.

13. Perforation of the appendix may take place intra-peritoneally or extra-peritoneally. Intra-peritoneal perforation may end in local or general peritonitis. Extra-peritoneal perforation may end in a local infection, with abscess.

14. Undoubtedly, micro-organisms play a very important rôle in the etiology of appendicitis.

15. The cardinal principle in operating is to manipulate the viscera as little as possible.

16. The danger of ventral hernia may be obviated by carefully closing each layer separately.

17. Entire closure of the wound by first intention can be effected only in cases in which the operation has been undertaken in the early stages of the attack, before suppuration is present.

18. Aspiration is considered an unsafe procedure, as we may cause the abscess to rupture, or if there is only a small amount of pus present, it may not be reached at all. An exploratory incision is far safer, and at the same time the appendix may be removed.

19. Careful search should be made for multiple abscesses. When there is an abscess, no search should be made for the appendix, unless it can be done without disturbing the peritoneal adhesions. Simply wash out the abscess and drain.

20. McBurney's point is of very little diagnostic value, as the appendix is not uniformly found in what is called a normal position. If we depend on this point, we are liable to be misled in our diagnosis.

21. Fluctuation can not always be detected, even when an abscess of large size is present.

22. We do not always find noticeable symptoms when rupture takes place, neither can we always locate a tumor, even when an abscess of large size is present.

O'Keefe, P., Oconto, Wis.: Appendicitis. (*Milwaukee Medical Journal.*)

What shall be done with the diseased appendix and when shall it be done? As sepsis is indisputably a surgical disease, internal medicine being entirely inert against it, and as appendicitis in the great majority of cases ends in sepsis in spite of fomentations, ice-bags, and medicines, it seems plain to me that our

only hope is in surgery, and the brilliant results already obtained by many surgeons should set at rest all doubts as to the proper procedure.

As to the time of operation, it should be done early, not as indicated by hours or days, but by the progress of the pathological process. One patient may require surgical interference during the first day, while another will not require it till the second, third, or fourth day.

If the patient is suffering from severe symptoms, such as to justify the fear of perforation, an operation should be done even on the first day. As the appendix hangs loosely in the pelvic fossa and is entirely surrounded by peritoneum, perforation can not occur without involving and infecting the peritoneal cavity, unless limiting adhesions have been formed, and as we have no means of knowing thus early whether such adhesions will be formed or not, we should not wait, as the danger before perforation is slight, if removed, as compared to that of general septic peritonitis, which is sure to follow in these cases.

If perforation has already taken place, as shown by the symptoms of general septic peritonitis with shock, an immediate laparotomy with thorough cleansing of the peritoneal cavity is imperatively demanded. If, on the other hand, we find on our first examination that limiting adhesions have been formed, as shown by tumefaction, we can wait a reasonable time, so that the pus may be evacuated without opening the peritoneal cavity.

Operations *in extremis* have a bad effect on the community and injure the cause of surgery, as so many cases necessarily terminate fatally.

Reed, Chas. A. L.: New Operation for the Radical Cure of Inguinal and Femoral Hernia. (*Cincinnati Lancet-Clinic.*)

The conclusions given by the author in favor of his operation are as follows: (1) The incision through the abdominal wall is important because it places all of the conditions under the direct control of the operator. (2) The inversion and bisection of the sac furnishes two excellent instrumentalities for the further obliteration of the canal. (3) The complete enucleation of the cord from within the pelvis outward still further denudes the canal of

its serous lining. (4) The suturing of the antero-posterior pillars of the internal ring strengthens the parieties at the most strategic point and secures the occlusion of the canal by the deposit on it of firm cicatricial tissue. (5) The transplantation of the peritoneal flaps (*a*) destroys the infundibular form of the peritoneum, and (*b*)completely protects the now closed ring from dilating by visceral pressure.

On general review of the operation I feel that it can be commended for the following reasons, viz:

1. It is safe. There ought to be no deaths from it when done in uncomplicated cases under sanitary surroundings, and by an operator skilled in abdominal surgery.

2. It causes but little loss of time. The surgical period is over within a week, although a longer time ought to be taken to permit the parts to become firm. A truss should not be worn after getting up.

3. It is comparatively painless. In the absence of internal ligatures compressing nerve trunks it is gratifying to note the absence of all pain except the slight soreness of the superficial incision.

4. It is curative. The complete closure of the internal ring and the obliteration of the canal successfully prevent the recurrence of the hernia.

WALLING, W. H., PHILADELPHIA: INJECTION TREATMENT OF HERNIA; WITH FORMULA OF FLUID. (*Medical and Surgical Reporter.*)

To Heaton and Warren, of Boston, belongs the credit of bringing this treatment into prominence, but it was not until it was considered from a scientific basis that it became really successful. Chemistry has come to our aid in this matter. Substances that are in themselves harmful, by combining them with other substances, or by arranging their elements differently, become useful therapeutic agents. Reducible hernia may be quickly and easily cured without danger, with little loss of comfort to the patient, and no loss of time; the essentials being a deft hand, a proper fluid, and a trocar and canula syringe. The technique is as follows: Place the patient on the operating-table, reduce the protrusion, if out, wash the parts well with some anti-

septic fluid, invaginate the scrotum with the index finger, and locate the external ring; inject into the skin at this point five minims or more of a five-per-cent. solution of cocaine, to which has been added one drop of a one-per-cent. solution of nitroglycerine. Have the hernial syringe filled with fluid, displace the air, wipe off the drop of fluid which may appear at the needle's end, and carefully note how far the canula must be turned off in order to entirely cover the needle point. Allow three minutes for the cocaine to take effect, and having drawn back the canula, exposing the needle spear, thrust the instrument through the skin and fascia at the point of the cocaine injection. Push the instrument well into the external ring, carefully avoiding the cord. Change the instrument to the other hand and, again having invaginated the scrotum, be sure that the needle has entered the ring. Then screw down the canula until it covers the point of the needle, and dipping down with the instrument pass the canula by gentle manipulations up the canal to the inner ring. In doing this bear in mind that the inguinal canal is from one and one half to two inches in length, lying nearly parallel with Poupart's ligament, and about one half inch above it.

Having reached the inner ring, carefully and slowly inject from three to five minims of the fluid, a minim at a time; wait one or two minutes, slightly withdraw the piston of the syringe in order to empty the needle, and withdraw the instrument. Gently massage the parts to evenly distribute the fluid. Cover the puncture with an aseptic collodion. There will be a more or less burning or smarting sensation experienced by the patient, but by lying quietly for a few moments it will pass off. It may return for a short time when the truss is adjusted, which must be done before the patient rises.

He must be instructed to take the truss off only after he has lain down at night, and put it on before arising in the morning.

Repeat the operation every five or seven days, according to the amount of the fluid used and the degree of the reaction. There will be some soreness for a day or two, and the patient must be told this. A certain amount of healthy inflammation must be set up and maintained for a sufficient length of time, in order to effect a cure. From six to twelve injections usually suffice. The older the patient the longer the time required. A

well-fitting truss must be adjusted and worn before operating for a few days, in order to see if it keeps the hernia well reduced.

The fee for treatment ranges from $25 to $100, or more. A double rupture should be double pay; one half in advance. For fitting a truss a charge of $10 in advance always.

Any physician may soon become expert in the operation; there is absolutely no danger if a proper instrument and fluid be used.

Ruptures in children are sometimes cured by a single injection. The following is the composition of the fluid recommended:

℞	Complex salts of aldehyde	30 per cent.
	Iodo-ethylate of guaiacol	30 per cent.
	Sulpho-tannate of zinc	20 per cent.
	Free guaiacol	5 per cent.
	Beechwood creosote	15 per cent.

These rare and delicate chemicals are separately prepared, then carefully combined and dissolved in an antiseptic medium, in strict conformity with their respective affinities and dosage. Injection dose three to five minims.

Rinse out the syringe with alcohol, never with water, as it is decomposed by water.

Jones, A. A., Buffalo: Painful Gastric Neuroses, their Nature, Symptomatology, and Etiology. (*Medical News.*)

Pain in the stomach is always evidence of some disturbance of sensory innervation of that organ, and the success that attends the endeavor to cure a painful gastric condition will be commensurate with the completeness of the removal of the cause. If the nerves of the stomach are not disturbed by direct or remote irritation, or by disorder of their nutrition from chronic disease or certain forms of toxemia, digestion takes place without sensation. Many instances of pain in the stomach are doubtless of the nature of neuralgias.

The most severe form of gastric pain is that which we designate essential gastralgia. It is of a paroxysmal nature, occurs most frequently in hysterical women, comes on for the most part independently of the time of eating or of the character of food, and is accompanied by great nervous perturbation. The duration of a paroxysm of gastralgia varies in different cases and in

separate attacks in the same case. There is a notable tendency of the patients to exaggerate the pain.

The location of the pain in essential gastralgia is often in the region of the pylorus, which fact sometimes confuses the exclusion of biliary colic in differential diagnosis.

Of the less severe forms of gastric pain, the time of onset, the character and the location are of chief importance. Some have pain after eating, others an hour before eating, and a proportion of cases at irregular intervals. A few cases complain of constant pain in the stomach.

Cardialgia is the predominant form of pain in some cases. It may or may not be accompanied by regurgitation or by belching of gas. Sometimes spasm of the cardia is accompanied by severe pain.

The character of the gastric pain has been variously described as shooting, boring, gnawing, or tearing; or a dull, dragging, heavy ache.

As etiological factors may be mentioned neurasthenia (gastralgia with this complex trouble), hysteria (though it is difficult to draw a line of distinction between neurasthenia and hysteria), locomotor ataxia, chlorosis, and the conditions of general malnutrition caused by lithemia, gout, rheumatism, syphilis, malaria, tuberculosis, and renal insufficiency.

Jessop, T. R.: Appendicular Colic. (*British Medical Journal.*)

1. The vermiform appendix is liable to partial occlusion of its canal from various causes, some of which are permanent while others are transient.

2. The symptoms by which such incomplete obstruction is to be recognized are those of "appendicular colic."

3. In cases of recurring appendicular colic, and especially if there be at the same time an increasing severity, our practice should be to recommend the removal of the appendix.

4. The time has arrived when such misleading names as typhlitis, perityphlitis, cecal, and pericecal abscess should no longer be applied to diseases having their origin in the vermiform appendix, seeing that appendicular colic, appendicitis, and appendicular abscess more correctly and quite as euphoniously and concisely describe the conditions in each case referred to.

Book Reviews.

The International Medical Annual and Practitioner's Index—1894. New York: E. B. Treat, 5 Cooper Union.

This is the twelfth year of this work. Among its contributors are such men of note from this country and abroad as W. T. Bull, H. D. Chapin, G. M. Hammond, P. F. Mundé, Robert Saundby, and many others of equal note.

Its contents are arranged alphabetically, and many are the valuable points and therapeutical hints contained in its seven hundred pages.

The subject of "Hemorrhoids" is considered in a page and a half, and the writers quoted from are Smith and Rigby in *The Lancet*, and articles in *Annals d'Orthopédie; L'Union Médicale*, and *Therapeutic Gazette*. Smith recommends the clamp and cautery, using cautery blades with serrated edges, heated to a dull-red heat. Dilatation of the sphincter previous to operation is highly recommended. Chrysarobin suppositories are recommended by Rossolo, and an ointment of potassium iodide and powdered iodine in glycerine by Preismann for internal hemorrhoids, the latter claiming a cure in from two to three weeks. We consider this entirely too broad an assertion.

The radical cure of hernia is dwelt upon at some length, Bassini's method being recommended.

Limited space prevents a full review of this work in detail, but the choice of contributors and the reputation which it already holds and fully lives up to in this '94 edition is sufficient recommendation.

Principles of Surgery. By N. Senn, M. D., Ph. D., Professor Practice of Surgery and Clinical Surgery, Rush Medical College, Chicago; Professor of Surgery in the Chicago Polyclinic; Honorary Fellow, College of Physicians, Philadelphia, etc. Philadelphia: The F. A. Davis Co., Publishers.

Of all books published in the last decade this is perhaps the most important one to the medical profession. Numerous books have been issued on surgery in the last few years both in this country and Europe, but they have been mainly given to the

treatment of surgical affections. This one is just what it claims to be, a work that deals with the principles of surgery. Time was when a number of books could be read, which were devoted to surgical pathology, but the recent discoveries relating to the etiology and pathology of surgical diseases have made all such books, as the author says, almost worthless. This work of Professor Senn's is eminently suited for the student's work, whether that student be in a medical college or engaged in the practice of surgery. It is truly an original work, such as only the distinguished author can write. After reading the book one is astounded at the revelations contained therein when contrasted to any similar work that was written even twenty years ago. The chapters devoted to the consideration of inflammation and pathogenic bacteria are especially interesting. Herein is found a thorough knowledge of the fundamental principles of surgery. The book shows a wonderful amount of research and study. The language used is clear and concise, and though dealing with a difficult and intricate subject the diction is wonderfully plain. It is bound to be a great favorite as a text-book in medical schools, and will be ever popular with the general practitioner. The book is handsomely bound in sheep, but the paper on which it is printed is not in keeping with the profound knowledge that is written on its pages. It goes without the saying that the work has had an immense sale.

A Manual of Modern Surgery, General and Operative. By JOHN CHALMERS DACOSTA, M. D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia; Chief Assistant Surgeon, Jefferson Medical College Hospital, etc. Philadelphia: W. B. Saunders. 1894.

This is one of the most concise and best written books that it has been our pleasure to read within the year. Every thing in it is essential to the practice of surgery, and nothing in it is useless. It is more than a compend, and meets the requirements of a text-book. It contains 785 pages of reading matter tersely written. The author makes bacteriology the subject of his first chapter, and deals with it in a manner that is both simple and lucid. Indeed surgery has been so revolutionized in the last decade or two that a student is ill informed unless he is a master of this subject. The author has shown rare discretion in leaving out of consideration such subjects as ophthalmology, gynecology,

rhinology, otology, and laryngology. To deal fully with one or more of these subjects would take as much space as is taken by his valuable work. Besides they belong to specialties and should be considered only in special works. The author has drawn much on different works, and quotes many authorities, but there is a great deal in his book that is original. It is admirably suited to student life, and it will be of wonderful aid to any one pretending to do surgery. It is beautifully illustrated, containing one hundred and eighty-eight illustrations in the text, and thirteen full-page plates in colors and tints. It is printed upon first-class paper, and in splendid type. It deserves to have a very large sale.

Practical Uranalysis and Urinary Diagnosis: A Manual for the Use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, M. D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Urology and Urinary Diagnosis at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes: Its Causes, Symptoms, and Treatment." With numerous illustrations, including photo-engravings and colored plates. In one crown octavo volume, 360 pages; in extra cloth, $2.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

Practical analysis of the urine has been treated of in a very complete, concise, and thorough way in this work. Into its pages have been put the practical knowledge which is generally only to be found in more complete works on medicine, surgery, etc. Unusual to this kind of work the student is taught not only how to detect, isolate, and determine the constituents of the urine, normal and abnormal, but also to determine the presence of disturbed physiological processes, to detect the presence of pathological changes, and to measure the degree of both. The appendix upon the subject of urinary examination for life insurance is a valuable one. It is a most excellent work throughout.

A System of Legal Medicine. By ALLAN MCLANE HAMILTON, M. D., and LAWRENCE GODKIN, ESQ., of the New York Bar. Illustrated. Volume I. New York: E. B. Treat, 5 Cooper Union. 1894.

This is a great work. It has been known that the author has been engaged for many months collecting data for a work upon medical jurisprudence, and the volume before us fulfills our greatest expectations.

A wise choice has been made in the selection of his colaborators, a mere mention of a few of whom is sufficient guarantee of the worth of their writings: James F. Babcock, Lewis Balch, Ph. D., M. D., Cortlandt Field Bishop, Esq., Francis A. Harris, M. D., R. C. McMurtrie, Esq., William A. Purrington, Esq., Victor C. Vaughan, A. M., Ph. D., M. D., etc. The volume before us, Number I, has a preface by Dr. Hamilton, and an introduction by Lawrence Godkin, then follow chapters upon Medico-Legal Inspections and Post-Mortem Examinations; Death in Medico-Legal Aspects; Blood and Other Stains—Hair; Identity of the Living, etc. This latter chapter is most excellent, by Dr. Hamilton, and the collection of illustrative cases show a painstaking and thoughtful preparation of the chapter. The work is profusely and splendidly illustrated, and there are many colored cuts.

These two volumes will prove an indispensable portion of all complete libraries, and no criminal lawyer can afford to be without it.

Obstetric Surgery. By Egbert H. Grandin, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the French Hospital, etc.; and George W. Jarman, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the Cancer Hospital, etc.; with eighty-five (85) illustrations in the text and fifteen full-page photographic plates. Royal octavo, 220 pages. Extra cloth, $2.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In these days of specialism such books are needed, and it is essential for the student, general practitioner or obstetrician to have in his library such a book as this one upon the special subject of "Obstetric Surgery," in order that a true knowledge of this important field may be had. Drs. Grandin and Jarman have written a thoroughly practical and up-to-date book; clear, concise, thorough, and radical where necessary. The book is thoroughly illustrated with well-selected cuts from accepted textbooks of obstetrics, and the half-tone cuts are splendidly executed.

It is pleasing and refreshing to read such sentences as the following: "*Aseptic* and *elective* obstetrics rob labor of its terrors and the puerperal state of well-nigh its sole risk." "A scientific knowledge of configuration of the female pelvis and of the methods of estimating its capacity is an essential prelude to the

practice of midwifery." "It is customary to apply the blades first to the sides of the pelvis, irrespective of the position of the child's head, and afterward, if possible, have them grasp the child's head in its bi-parietal diameter."

The work includes a short sketch of symphyseotomy and a description of its technique and cesarean section. It it neatly bound in cloth, and contains two hundred and twenty pages.

Landmarks in Gynecology. By Byron Robinson, B. S., M. D. The Physician's Leisure Library. Two volumes. Price, 25 cents.

These two little volumes contain an abstract of some of the author's lectures at the Chicago Post-Graduate Medical School.

His classification is rather unique, naming the "Landmarks" as follows: (1) Anatomy; (2) Menstruation; (3) Labor; (4) Abortion; (5) Gonorrhea; (6) Tumors.

In considering these various divisions, the result of much practical work at the dissecting table is evidenced; especially is this true of the first and sixth "landmark."

As to the etiology of menstruation, it is attributed to a small nerve ganglia situated in the walls of the uterus and tubes, and is a manifestation of the nervous system.

The salient questions in menstruation are given as, the age of puberty, the regularity and the amount of discharge, and the pain. These are very complete little volumes, and are fully up to the usual excellence of the productions of this house.

Syllabus of Lectures on Human Embryology: An Introduction to the Study of Obstetrics and Gynecology, for Medical Students and Practitioners. With a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynecology and Lecturer on Obstetrics in the Detroit College of Medicine; Fellow of the Royal Microscopical Society, of the British Zoological Society, American Microscopical Society, etc. Illustrated with seventy (70) outline drawings and photo-engravings. 12mo, cloth, 126 pages, interleaved for adding notes and other illustrations, $1.25 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

The object of this little work is stated by the author in his preface to be to furnish to students and practitioners of medicine an outline of the principal facts in human embryology. A great deal of information has been crowded into the one hundred and twenty-five pages of the work, and as a guide to lecturers upon

this subject and an assistance to students will prove itself to be very valuable. The book is neatly bound, and interleaved throughout for notes upon the various subjects.

The Medical Review Visiting List. Perpetual. St. Louis, Mo.: J. H. Chambers & Co. 1895.

This is a weekly medical review and pocket reference book and visiting list.

The first eighty pages are given up to the visiting list, which we think would be more practicable if each double page contained ruled lines for each day of the month, leaving space for name and address of patient, and amount of charges, rather than the weekly arrangement on each page.

Following this is monthly memoranda, nurses' addresses, clinical record, a monthly obstetric record, birth and vaccination record, bills rendered, cash received, monthly miscellaneous memoranda, articles loaned and death record completes the list.

The Sympathetic Nerve. Drawn from a Dissection prepared by Byron Robinson, M. D. Chicago: E. H. Colgrove & Co. 1894.

This most admirable piece of work consists of a life-size drawing of the sympathetic nerve, done by Dr. Robinson after five years of labor in dissecting. The drawing is the result of one month's labor of an artist working daily under the author's personal supervision. It is decidedly the most complete and comprehensive chart that we have ever seen. Being life size, it will prove of inestimable benefit to the student and teacher.

Dr. Robinson is to be congratulated for his perseverance, and upon the excellence of his completed work.

A Collective Investigation as to the Influence of Albinism upon the Eye. By George M. Gould, M. D. Philadelphia.

This is a blank devised by the editor for the purpose of gaining all the information obtainable as to the condition of the eyes of Albinos. Physicians who have had albinotic patients are earnestly requested to forward answers to the inquiries made in the chart, copies of which will be furnished on application, and necessary expenses incurred by correspondents, such as for postage, etc., will be paid.

Books and Pamphlets Received.

TALMAGE ON HEREDITY.—Now, the longer I live the more I believe in blood—good blood, bad blood, proud blood, humble blood, honest blood, thieving blood, heroic blood, cowardly blood—writes the Rev. T. DeWitt Talmage in the December *Ladies' Home Journal.* The tendency may skip a generation or two, but it is sure to come out, as in a little child you sometimes see a similarity to a great-grandfather whose picture hangs on the wall. That the physical and mental and moral qualities are inheritable is patent to any one who keeps his eyes open. The similarity is so striking sometimes as to be amusing. Great families, regal or literary, are apt to have the characteristics all down through the generations, and what is more perceptible in such families may be seen on a smaller scale in all families. A thousand years have no power to obliterate the difference. The large lip of the House of Austria is seen in all the descendants, and is called the Hapsburg lip. The House of Stuart always means in all generations cruelty and bigotry and sensuality. Witness Queen of Scotts. Witness Charles I and Charles II. Witness James I and James II, and all the others of that imperial line.

Kola: Its Pharmacognosy, by Schlotterbeck; Physiological and Therapeutic Actions, by Stewart; A Clinical Study of Kola, by Shoemaker; and Bibliography. Published under the direction of F. E. Stewart, M. D., Ph. G., of the Scientific Department of F. Stearns & Co.

A Contribution to the History of the Discovery of Modern Surgical Anesthesia, with Some New Data Relating to the Work of Dr. Crawford W. Long. By Luther B. Grandy, M. D., Atlanta. Reprint from the Virginia Medical Monthly.

The Bubo Plague in China, with a brief account of the Great Plague of London. By Burnside Foster, M. D., St. Paul. Reprint from the Journal of the American Medical Association.

Gonorrhea of the Rectum. By Henry Jacobson, M. D., St. Louis, Mo. Reprint from the American Medico-Surgical Bulletin.

Intraligamentous and Retroperitoneal Tumors of the Uterus and its Adnexa, with two illustrations. By William H. Wathen, A. M., M. D. Reprint from the Transactions of the American Gynecological Society, 1894.

Diseases of the Alimentary Canal; Treatment; Internal and External Hydrotherapy; Medication. By Dr. James Osbourn DeCourcy, of St. Libory, Ill. Reprint from the Journal of the American Medical Association.

Inflammatory Disease of the Uterus and Appendages and the Pelvic Peritoneum; Causation and Pathology. By L. S. McMurtry, M. D., Louisville. Reprint from the American Journal of Obstetrics.

Why Chronic Urethritis is Ordinarily Difficult of Cure, and an Efficacious Method of Curing it. By Bransford Lewis, M. D., St. Louis. Reprint from the Tri-State Medical Journal.

The Clamp and Cautery Operation for the Radical Cure of Hemorrhoids. Read before the Maine Medical Association. By B. B. Foster, M. D., of Portland.

Pelvic Disease in its Relationship to Insanity in Women. By John Young Brown, M. D., Lakeland, Ky. Reprint from the American Journal of Obstetrics.

The Etiology, Pathology, and Treatment of Intestinal Fistula and Artificial Anus. By N. Senn, M. D. Reprint from American Journal of Obstetrics.

Massage in Gynecology. By Oscar J. Mayer, M. D., San Francisco, Cal. Reprint from the Journal of the American Medical Association.

A country editor, puffing air-tight coffins, innocently writes: "No person having tried one of these coffins will ever use any other."—*Truth.*

A Report of One Hundred and Seven Intubations. By W. B. Pusey, M. D. Reprint from the American Practitioner and News.

The Climate of Western North Carolina, etc. By Karl Von Ruck, M. D., Asheville, N. C. Reprint from the Therapeutic Gazette.

Appendicitis Obliterans. By N. Senn, M. D., Ph. D., LL. D. Reprint from the Journal of the American Medical Association.

Address to the "Honor Men" of the Barnes' Medical College, St. Louis, Mo. By James T. Jelks, M. D., Hot Springs, Ark.

Nucleins, A Clinical Study. By John Aulde, M. D., Philadelphia, Pa. Reprint from the New York Medical Journal.

Modern Homeopathy; Its Absurdities and Inconsistencies. By William W. Browning, A. B., LL. B., M. D., Brooklyn.

Charity Organization and Medicine. By George M. Gould, M. D., Philadelphia. Reprint from the Medical News.

Rational Medicine and Charlatanry. By Burnside Foster, M. D., St. Paul. Reprint from Northwestern Lancet.

Notes on Lithium. By Enno Sander, Ph. D., Ph. G. Reprint from the Journal of the American Medical Association.

A Case of Double Gastrolith. By W. B. Outten, M. D., St. Louis, Mo. Reprint from the Medical Fortnightly.

Abdominal Surgery on the Battle-field. By N. Senn, M. D., Ph. D., LL. D. Reprint from St. Louis Clinique.

Hydrogen Dioxide H_2O_2. By L. D. Kastenbine, A. M., M. D. Reprint from the Louisville Medical Monthly.

Practical Antiseptics. By Paul Paquin, M. D. Reprinted from Hot Springs Medical Journal.

Some Points on Stricture of the Rectum. By L. J. Krouse, M. D., of Cincinnati.

The Land of Perpetual Summer. By Dr. Wm. A. Edwards, San Diego, Cal.

In Defense of Pasteurism. By M. B. Colah, M. D., St. Andrews, Bombay.

Notes and Queries.

We are so heartily in accord with the following editorial which appeared in the *Southern Clinic*, that we reproduce it entirely:

The Anesthetizing Specialist.—We are pleased to note a most timely editorial in our able contemporary, the *New York Medical Record*, in which many forcible reasons are adduced for the recognition and employment of public anesthetizers in our various hospitals and elsewhere in cases requiring anesthetics. We heartily approve of the sentiments therein expressed, and would further add our voice in behalf of the adoption of this specialty by a limited number of physicians in all cities or communities in which surgery is done to any extent. We all know that very few general practitioners are skillful or proficient in the administration of anesthetics to the extent of guarding carefully against possible accidents. The usual custom of picking up any one to give chloroform and watch the patient through a prolonged operation is a very serious and dangerous one, and on several occasions we have had to stop in the midst of an operation to resuscitate patients who had gotten into collapse by reason of the failure of the anesthetizer to recognize the plainest danger signals. The same thing has repeatedly happened through sheer neglect, when the student or young physician has devoted himself to watching the steps of the operation rather than the respiration, color, and pulse of the patient.

The specialist who will post himself thoroughly on the entire subject of anesthetics and anesthesia, and be prepared to induce anesthesia with the least possible danger to the patient, and who will be also competent to detect approaching danger to the patient, and combat such conditions with the best recognized agents and appliances, would be in demand, and after a short while the conscientious operator would not go into serious operation without his aid.

The "New Chambers Street Hospital," New York City.—Any one interested in seeing what an ideal reception hospital should be, will be well repaid by inspecting the beautiful five-storied building recently erected by the Society of the New York Hospital to replace the incommodious old House of Relief.

The new hospital is built upon the corner of Hudson and Jay streets, and is constructed of smooth red brick and terra cotta, with an imposing entrance on Hudson Street. The building is well lighted from all sides. The ambulance drives directly into the basement, near the elevator, so as to avoid any unnecessary handling. The floors are of mosaic. In the basement is a special feature in what is known as the "sunstroke" room, where the patient is placed in a hammock, and lifted by pulleys moved on an overhead tramway, over a large bath-tub, then lowered into the tub. A dynamo in the building furnishes the power and light. Several rooms are set apart for operation and dispensary work in every department.

THE changes in style of packages and form of tablets in no sense changes Antikamnia nor withdraws "Antikamnia Powdered" from the market, which remains now as always, and in stronger demand than ever.

The item which appeared in the *Alienist and Neurologist* to the effect that "Antikamnia will hereafter be sold only in tablet form," tends to mislead and injure the demand for Antikamnia Powdered.

THE AMERICAN MEDICAL PUBLISHERS ASSOCIATION has just issued its Fall Bulletin, giving all the new advertisers in the field, together with the advertising manager of each concern. A new exchange list has also been prepared, revised, and corrected up to date. Both can be obtained by applying to the secretary, Chas. Wood Fassett, St. Joseph, Mo.

DR. SAMUEL E. MILLIKEN, of New York City, has been appointed a surgeon to Randall's Island Hospitals.

THE FOLLOWING SPECIAL ARRANGEMENTS HAVE BEEN MADE.

MATHEWS' MEDICAL QUARTERLY and the American Practitioner and News, to one address, for one year to new subscribers, $4.00.

MATHEWS' MEDICAL QUARTERLY and The Medical Fortnightly, St. Louis, both one year, including a copy of "Funnybone," $3.00. Send orders to

HENRY E. TULEY, M.D., Box 434, Louisville, Ky.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to EDITORS OF MATHEWS' MEDICAL QUARTERLY, Box 434, LOUISVILLE, KY.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the QUARTERLY will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The editors are not responsible for the views of contributors.

ALFRED COOPER.

MATHEWS'
MEDICAL QUARTERLY.
"ALIS VOLAT PROPRIIS."
Vol. II. APRIL, 1895. No. 2.

Original Contributions.

A REPORT OF A NEW METHOD OF EXAMINING THE RECTUM AND SIGMOID FLEXURE.

BY OTTO RAMSAY, M. D.,
BALTIMORE, MD.

[Written for MATHEWS' MEDICAL QUARTERLY.]

I have been closely associated for some time with Dr. Kelly in his work, and have been especially interested in his new method of examining and treating diseases of the rectum and sigmoid flexure. He has worked at this subject for many years, examining his patients in the knee-breast position with special instruments which he devised for the purpose, and which, in his hands, give perfect results. With these instruments, which are hollow metal cylinders of varying length and diameter, and with his patient in the proper position, he can bring into view the whole rectum and a considerable portion of the sigmoid flexure, recognizing lesions which, with the instruments usually in vogue, would be perfectly impossible, as, for instance, locating a stricture high up in the rectum or in the sigmoid flexure, mapping out areas of ulceration, demonstrating the extent of a proctitis or sigmoiditis, differentiating a stricture of organic origin from one caused by pressure of new growths of the other pelvic organs, etc.

He at first used short hollow metal tubes, varying in length from 8 to 12 centimeters ($3\frac{1}{5}$ to $4\frac{4}{5}$ inches), and with an inside diameter of from 3 to $3\frac{1}{2}$ centimeters ($1\frac{1}{5}$ to $1\frac{2}{5}$ inches). These have been gradually lengthened, going higher and higher up the

bowel, until now tubes of 35 centimeters (14 inches) in length are easily introduced to within 4 centimeters of the end, and a perfect view of the rectum and a considerable portion of the sigmoid flexure obtained through them. He has found that as a general thing it is not necessary to use tubes having an inside diameter of over 22 millimeters, these giving abundant space for treatment through them of the rectal tissues, a sufficient diameter for the satisfactory illumination of the field, and finally tubes of this diameter can be introduced without an anesthetic and with no distress to the patient.

DESCRIPTION OF THE INSTRUMENTS USED.

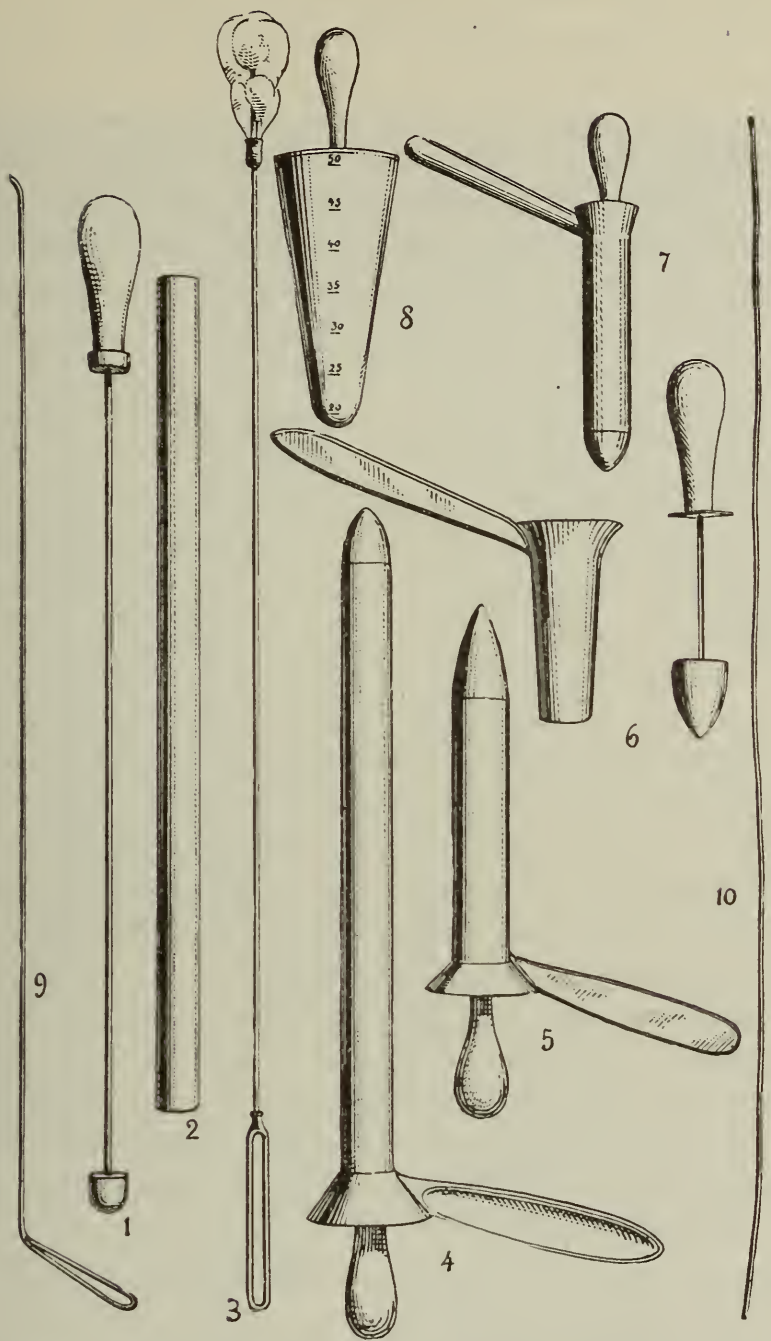
1. A short, tapering speculum or sphincteroscope, with wide funnel-shaped opening, 4 centimeters in length, distal end $2\frac{1}{2}$ centimeters, and proximal end 3 centimeters in diameter, with handle, and obturator with blunt, rounded end, for examining the sphincter area. (No. 6.)

2. A cylindrical speculum or proctoscope, 15 centimeters in length and 22 millimeters inside diameter, with funnel-shaped opening, handle and obturator, for examining the lower portion of the rectum. (No. 5.)

3. A cylindrical speculum or long proctoscope, 20 centimeters in length, otherwise like the above, for examining the upper portion of the rectum. (No. 4.)

4. A cylindrical speculum or sigmoidoscope, 35 centimeters in length, 22 millimeters inside diameter, with obturator and detachable handle, for examining the sigmoid flexure. (Nos. 1 and 2.)

In using larger specula than these it is often necessary to dilate the sphincter to allow of their introduction; and for this purpose he has discarded the ordinary dilators in series, and uses an instrument made in the form of a blunt cone with handle, the cone being 11 centimeters in length, with a diameter of 20 millimeters at the smaller end, increasing to 50 millimeters at the upper (No. 8); with this the rectum can be dilated equably to a diameter of 5 centimeters with little or no injury to the mucous membrane. Several long copper-wire applicators, roughened at the end to hold the cotton (No. 10), a small scoop, about 8 millimeters by 1 centimeter, set nearly at right angles to a long handle,



1. Obturator for sigmoidoscope.
2. Sigmoidoscope, 35 centimeters in length.
3. Cotton holder.
4. Long proctoscope.
5. Short proctoscope.
6. Sphincteroscope and obturator.
7. Small speculum used in treating lower portion of rectum.
8. Conical dilator.
9. Small scoop for removing fecal matter from specula.
10. Copper-wire applicator.

for removing fecal matter obstructing the tube (No. 9); and I have added to these a sponge-holder on long handle, with which cotton may be grasped and the mucous membrane cleansed (No. 3), completing the simple list of instruments for ordinary purposes.

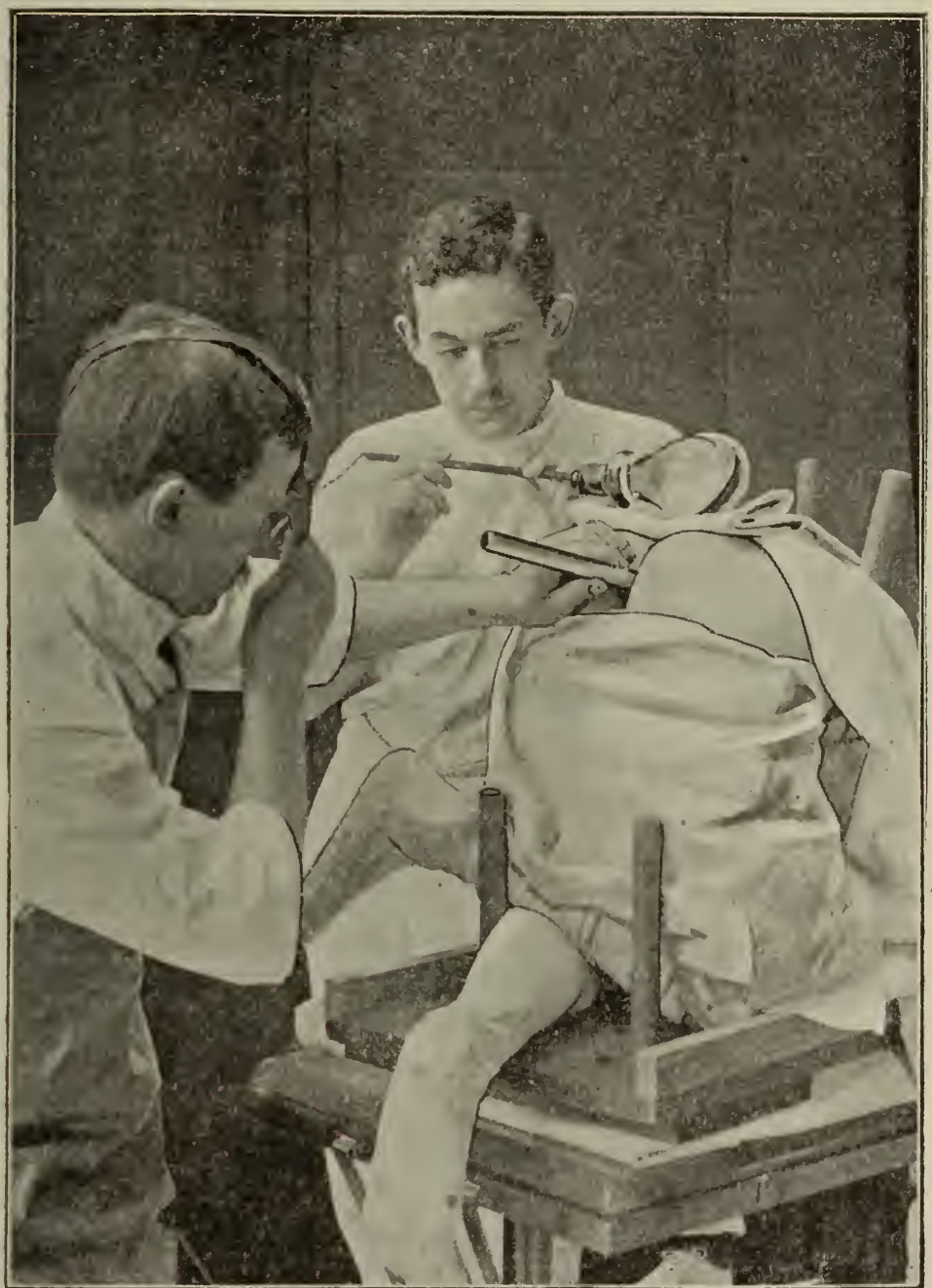
Illumination is best obtained by using a common head mirror reflecting an electric light, which is held by the short handle, by an assistant, just over the buttocks of the patient; a portable storage battery and an electric headlight carrying a mignon lamp are also useful.

THE EXAMINATION.

It is not necessary to use an anesthetic. The bowels must be well evacuated and the bladder empty. The ordinary examining table or a kitchen table is most convenient, the room being darkened. The patient is placed in the knee-breast position, the buttocks projecting a little; the buttocks are separated, the anus exposed, and the dilator well coated with vaseline is introduced with a boring motion until the sphincter is sufficiently dilated.

The speculum is well coated with vaseline and the handle grasped with fingers and palm, the thumb retaining obturator in position, and is introduced slowly with a steady, firm pressure into the bowel; the obturator is then removed and air allowed to enter and distend the lumen of the gut, this process being much facilitated by the knee-breast position, the tendency in this position being for the intestines to gravitate toward the diaphragm and give a larger free space in pelvis. In introducing the speculum one must remember the direction of the rectum, and that the promontory of the sacrum curves out prominently above the pelvis and can be recognized as a rounded projection into the lumen of the intestine; the speculum is certain to strike it, and must be gently lifted over.

Also, that the rectum and sigmoid flexure are normally more or less collapsed, with the folds lying in apposition, and that for the further introduction of the speculum the lumen of the intestine must be well distended. For this reason the knee-breast position is necessary, causing the intestines to gravitate toward the diaphragm, and acting somewhat as a suction apparatus, drawing in air as they recede. If, then, on attempting to pass the speculum a point is reached beyond which the lumen seems entirely closed and impassable, wait for a few moments and it will generally be found that the speculum passes easily.



Photograph of the position of patient, with speculum introduced, giving also the position of light.

A slight boring rotary motion is best for the introduction.

After the speculum is introduced to the desired point and the area beyond the opening examined, it will be found that, on withdrawing the speculum slowly, a perfectly satisfactory picture of the whole area below the point reached may be obtained, as the gut slowly collapses beyond the end of the tube. It is at this time that the examination is practically made, it being almost impossible to examine the mucous membrane thoroughly as the speculum is introduced.

Besides a means of diagnosis Dr. Kelly uses the rectal specula constantly in the treatment of inflammatory conditions of the mucous membranes of the rectum and sigmoid flexure, either making applications of various solutions on cotton, or thicker preparations may be applied on cotton tampons, which are placed over the desired areas, and removed some hours later.

In some cases, in which treatment rather than examination is to be carried out, it will be found nearly as convenient and will expose the patients less if they lie on their right side with thighs well flexed on abdomen and chest turned downward, pressing against table or bed, being practically the Sims position.

1418 Eutaw Place.

REMARKS UPON THE "AMERICAN OPERATION."

BY CHARLES C. ALLISON, M. D.,
Professor of Surgical Anatomy, Rectal and Genito-Urinary Surgery, Omaha Medical College.
OMAHA, NEB.

[Written for MATHEWS' MEDICAL QUARTERLY.]

In a recent communication E. H. Pratt claims to have "invented" the "American Operation" five years ago.

This patriotic name is defined in the Journal of Orificial Surgery to mean stretching the vaginal and anal sphincters, excising rectal papillæ and pockets, dilating the uterine cervix, removing preputial irritations, and stretching the urethra in either sex.

This procedure is also styled "all-around" work, and its therapeutic limitations, as indicated by the teachings of the Orificial Journal, seem indeed broad—cures being recorded when the operation is done for mal-nutrition, for recurrent appendicitis,

for epilepsy, for insanity, for tuberculosis, and for many lesions of the nervous system—a miscellaneous list of troubles, which have an alleged cause in reflex disturbances from the lower orifices of the body.

No one will doubt the wisdom of removing well-defined cicatricial tissue in the cervix uteri with repair of extensive lacerations, for the pressure effects of cicatrices and congestions have here a field highly susceptible to reflex disturbances.

Preputial irritations have long been recognized as causative factors in marked transferred symptoms, and diligent watch should be kept that they do not escape recognition.

Urethral divulsion doubtless has a place among proper surgical measures—an indication being for the examination of the ureters as described by Kelly—but that stretching the female urethra has been overdone must appear clear from any extensive clinical observations.

Stretching the anal sphincters is conceded to be a useful procedure in constipation, in turgescence of the hemorrhoidal vessels, in fissured or ulcerated anal mucosa, for physiological rest of the pelvic muscles when a painful lesion exists in surrounding organs, and for that other rather indefinite condition known as rectal neuralgia.

Thorough examination in this latter condition will reveal the exact pathological condition to be an exposed nerve filament, or pressure upon terminal nerves from the repair of trauma to the nervous membrane due to neglected hygiene of the bowels.

The office of the semi-lunar folds being to assist the sphincters in maintaining certain supremacy over peristalsis exposes them to very considerable trauma and abrasions, and neuralgias may follow.

Clinical experience is in keeping with this physiological predisposition of the valves and pockets to inflammation; and, although these changes are somewhat infrequent, yet they point to the regions of Huston's folds as elective areas of inflammation, and surgical rest may be best attained by divulsion and by incision of the denuded spots.

Peripheral sympathetic irritations may produce well-defined and even grave reflex disturbances, and merit therefore a very rigid examination, and the physiological rest attained by remov-

ing adhesions and inflammatory products by divulsion may be highly useful, but that most cases of intestinal disturbance, disordered secretion, impaired nutrition, and perverted nerve phenomena are due to orificial disorders can not be admitted.

The alimentary canal unfortunately affords too many major and minor elective inflammatory fields (Robinson) in regions where peritoneal infiltration means adhesions and pressure upon important ganglia and nerve trunks with immediate disturbance of secretion and motion, with the logical train of intestinal indigestion, imperfect assimilation, impaired nutrition, retained excreta with reduced integrity of nerve centers, weakened inhibition, and accentuated reflexes. Hence the dexterous juggling of words into phrases, "all-around work" and "American operation," is really an unscientific attempt to make a combination out of legitimate procedures which is calculated to mystify a credulous patron.

HORSESHOE FISTULA; A NEW PROCEDURE IN OPERATING.

BY J. RAWSON PENNINGTON, M. D.,

Professor of Dermatology, Syphilology, and Diseases of the Rectum in the Chicago Summer School of Medicine.

CHICAGO, ILL.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Doubtless this variety of fistula has caused the surgeon more concern than all the others combined. Yet if we would keep in mind the origin, insertion, relations, and functions of the external sphincter, and study more carefully the conformation of this fistula, we would find it comparatively simple. At the same time I quite agree with Dr. Mathews, who says: "I believe that it requires a more careful surgical operation to cure a complicated fistula in ano than almost any other surgical disease, and, if it is not eradicated by the operation, comes nearer getting the surgeon into disrepute than to lose a case after an abdominal section."

By the term "horseshoe fistula" we mean that variety which usually has one or more external orifices on either side of the anus, and an internal one in the median line behind. The exter-

nal openings may be equi-distant from the anus on either side, or one may be near the anal orifice and the other far out on the buttock, or situated anteriorly, or there may be only one external orifice, the other being of the blind variety. Again there may be many external openings, and in some cases more than one internal.

This fistula is generally caused by an abscess situated between the rectum and coccyx, which is prevented from breaking through the tissues immediately over it by the fibrous raphe extending from the latter to the anus; hence the pus courses its way forward and burrows through, usually, on either side of the anus externally and into the bowel dorsally between the two sphincters. No doubt many such cases are and have been treated as two separate and distinct fistulæ, and if the operator recognized that he had to deal with a horseshoe fistula, and followed the advice given in most text-books, he would slit up first one sinus then the other; and later, perhaps, observe that in both instances the sphincter had been divided obliquely, as shown in Figure 1, with incontinence of feces as a sequel. It is this kind of work that has brought disrepute upon rectal surgery and caused the laity to dread it.

FIG. 1.

Illustrating oblique division of the sphincter.

The operator should never lose sight of the fact that he must, if possible, preserve the function of the rectum; and, since this requires in most cases very superior judgment and expertness of manipulation, he should be thoroughly familiar with the anatomy and physiology of these parts, as well as the pathology of the disease, before attempting a rectal operation. He should also bear in mind that one may either remove or destroy the function of an eye, ear, testicle, kidney, or ovary, and in each case the

patient still retains an organ to subserve his purpose; but the individual whose rectum or sphincter has been destroyed has none other to take its place and must of necessity submit to the inevitable.

Allingham, Cripps, Van Buren, and other authors are any thing but clear in their description, pathology, and method of operative procedure in this, the most important and serious form of fistula with which the surgeon has to contend. The writer is indebted to Mr. Goodsall, of London, who first explained to him the origin, conformation, and his method of operating in this variety of fistula; and he would like to take this opportunity of thanking him, not only for instruction on this subject, but for much information on many special points in diseases of the rectum. In operating, preceded by accepted antiseptic precautions, etc., he passes a probe-pointed director through the internal opening, and on its point, in the median line behind, incises the skin; then pushes the director through and severs the tissues over it. Directors are then passed in at the external openings and out at the dorsal incision, and the tissues divided. This necessitates only one division of the sphincter, and that at right angles (Figure 3), which greatly diminishes the liability to incontinence of feces.

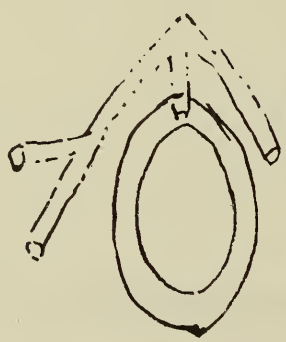


Fig. 2.

Fig. 3.

Figure 2 represents a horseshoe fistula with internal opening between the sphincters; and Figure 3 the incisions of the foregoing with only one division of the sphincter (after Goodsall).

The rationale and value of this method of operative procedure commends itself at once. However, in a very large per cent. of these cases we can lay open the fistulous tracts and cure our patient without dividing the sphincter at all. The

manner of operating is as follows: After dividing the skin on the point of the director, as above mentioned, instead of pushing the director through and dividing the tissues over it, remove it and curette this sinus thoroughly (Figure 4), then divide the other fistulous tracts as above described.

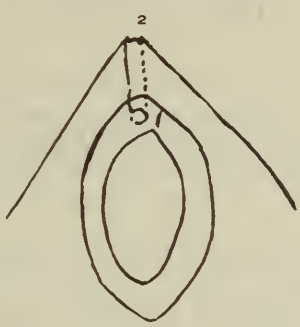


Fig. 4.

Tract from 1 to 2 is curetted, the others are divided.

This severs the attachment of the sphincter to the coccyx. The muscle is then pulled in and upward, which brings the walls of the curetted dorsal tract in juxtaposition, and they will unite, completely obliterating it. By this operation the sphincter is not divided at all, and we have simply an external wound with which to deal. This will heal very readily, and the danger of incontinence of feces is avoided. You will also observe that the bowels may move at any time, and that the excrement will not come in contact with the wound, as it is wholly external to the anus. Should, for any reason, the dorsal tract fail to heal, laying it open later would be a simple procedure, and it will not interfere in the least with the progress of the case.

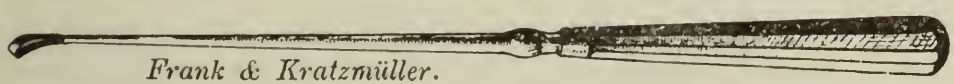


Fig. 5.

Fenestrated fistula curette.

This instrument, devised by the writer, is made after the uterine curette, save that it has a different curve and is much smaller.

103 State Street.

Gastro-Intestinal Disease.

OPERATIVE TREATMENT OF HERNIA.*

BY W. L. RODMAN, M. D.,

Professor of Surgery and Clinical Surgery, Kentucky School of Medicine; Surgeon to Kentucky School of Medicine Hospital, Sts. Mary and Elizabeth Hospital, and Consulting Surgeon, Louisville City Hospital.

LOUISVILLE.

[Published exclusively in Mathews' Medical Quarterly.]

In the brief time allotted I shall only be able to touch upon the more important features of the subject assigned me. That we may discuss the question intelligently it is necessary to speak first of the radical cure of hernia, secondly, of the treatment of strangulated hernia.

By radical cure is meant operative measures for the relief of hernia not strangulated. As has already been said by Dr. Bullitt in his paper upon trusses, we sometimes attain a radical cure by this usually palliative means of treatment, especially so in children. This, however, is not always the case even in young subjects with recent herniæ, and in the adult such a result is exceptional and accidental.

By doing one of several approved operations for the radical cure of hernia we may, with reasonable confidence anticipate the best results. So much good work in this line has been done within the past five years that one who is familiar with current literature upon the subject can no longer ask the question, Do radical operations cure? For years the term "radical cure" was, I admit, misleading, indeed a misnomer. That a small per cent. of failures will still be recorded in the practice of our best surgeons, doing the most approved operations, none are so optimistic as to deny. This admitted fact does not warrant the withdrawal of the term radical cure. Is there any operative measure for any disease or condition uniformly successful? Certainly not. In truth there are few operations entailing so slight a mortality followed by the beneficent results of radical cure operations for hernia.

*Read before the Louisville Academy of Medicine, January 21, 1895.

It is not my purpose to-night to prove this statement by quoting elaborate statistics. To do this would necessitate reference to all the most popular operations, and to the many surgeons whose work in this line has attracted attention. I shall refer to the work of but one man. In a letter just received from my friend, Dr. W. B. Coley, of New York, the following statement is found: "I shall read a paper on hernia next week before the New York Surgical Society, reporting two hundred cases of my own, with one death (from ether pneumonia), and but three relapses during the past three and a half years."

Dr. Coley, as House Surgeon at the Hospital for the Ruptured and Crippled, has unusual advantages for both operating upon and following up his cases. Most of his operations have been after Bassini's method, which, by the way, is the most popular operation both in this country and in Europe. (Bassini's, Halstead's, Kocher's, and Macewen's operations were here described.)

Having demonstrated both the safety and utility of the most approved operations for the radical cure of hernia, it only remains to indicate the conditions calling for operation. Any reducible hernia which is perfectly retained by the application of a suitable truss need not be operable if the patient is both sufficiently intelligent and willing to persist in its use throughout life, this being generally necessary. *Per contra*, if the patient be indifferent to the possible dangers of strangulation, or from any cause is lax in the use of his truss, his expectancy will be enhanced by a radical operation. All herniæ not perfectly reducible and retained by a truss should be operated upon. All irreducible herniæ, unless perhaps in old or feeble subjects, are certainly proper cases for the radical cure, for in addition to the perpetual menace of strangulation are the dangers of rupture, inflammation, incarceration, etc.

Strangulated Hernia. The profession is nearer together in the treatment of strangulated than non-strangulated herniæ. Here it is recognized that something decisive must be done, else death soon eventuates. Even in strangulation many practitioners do not appreciate the *great* value of time. Taxis, so often a delusion and a snare, is the refuge of this class. Many who employ it do so without intelligence, being ignorant of the anatomy of the special region involved, and in many instances unable to

differentiate between the several varieties of hernia. Squeezing the rupture is with them synonymous with taxis.

The fear of herniotomy made the older authors exaggerate the value of taxis as a remedial agent. That it rarely succeeds in undoubted strangulation, especially in femoral hernia, is, I think, beyond question. When it apparently succeeds it may do so at the expense of a ruptured intestine, incomplete reduction or reduction of the hernia *en masse* with the constriction unrelieved. I have known all to occur, with death in every instance.

By incomplete reduction is meant that the swelling disappears after taxis, a portion of the gut still remaining in the upper part of the canal, with the symptoms of strangulation persisting. I saw a typical case of this kind five years ago. A robust young man, living in Smith's Grove, Warren County, Ky., who had for some time been the subject of a reducible inguinal hernia, was suddenly seized with strangulation on Monday morning. The tumor was said to be large. After several attempts by as many men it was reduced Tuesday morning. I was telegraphed for Thursday night, as the symptoms of strangulation persisted, and his condition was steadily growing worse. I reached him Friday morning about daylight. He was in collapse. It was evident that his hernia had either been reduced *en bloc*, or that a portion of the gut was still in the inguinal canal.

I declined to operate when I first saw the case, as I was convinced that he would die upon the table. After using morphia hypodermatically, whisky, hot applications, etc., he rallied perceptibly by eight o'clock. His grandfather was a physician, and insisted upon his being cut and given the only chance for his life. Believing a median section indicated rather than a lateral one, I operated by the former method. Putting my hand into his belly and carrying it down to the internal ring, I found a portion of small intestine still in the inguinal canal. Gentle traction soon released the imprisoned gut, and careful examination showed that I had done it no damage. It was, strange to say, after four days strangulation, in better condition apparently than we sometimes see intestines after six hours' constriction. The operation was completed in less than twenty minutes. Patient rallied reasonably well, all things considered, and when I left him at 1 o'clock P. M. was in good condition, though his pulse was 140 and feeble. He

died suddenly the next day from heart failure. An operation done twenty-four hours earlier would undoubtedly have saved the man's life.

A hernia is reduced *en bloc* when its sac is separated from the surrounding tissues and reduced with its contents, the strangulation being unrelieved. This, of course, can only happen in recent herniæ before the adhesions between sac and surrounding tissues have become intimate and dense. When this accident occurs the tumor moves upward toward the belly, but is arrested usually at the transversalis fascia. I saw a typical case of this kind in consultation while practicing at Abilene, Texas, in 1883. Patient was moribund when I was called in, and of course no operation was done. A *post-mortem* was not permitted, but there could be no question as to the diagnosis. LeDran first called attention to this accident in 1726.

Rupture of the intestine primarily or secondarily from injudicious taxis is by no means infrequent. I would not be understood as opposing taxis in all cases. I do, however, wish to make a plea for its rational employment. It is only suited to recent strangulation and to herniæ which are not very tense. When it is remembered that gangrene of the intestine has in many instances occurred in six hours after strangulation the dangers of taxis will be readily appreciated.

Three weeks ago I operated upon a case of strangulated hernia for Drs. Bloom and Scott, where the condition of the gut was bad enough, after two hours of strangulation, to cause me some anxiety. It was a large entero-epiplocele of the femoral variety, the second case of femoral hernia I have ever operated upon in a man. The hernia was exceedingly tense, and prolonged taxis would almost surely have resulted in rupture of the bowel. This condition was promptly recognized by the attending physicians, and I was summoned to operate. As is my custom in all cases, every preparation was made for herniotomy before administering the anesthetic. Taxis was made for ten minutes, and, failing to reduce, I at once operated. The bowel was black and most tightly constricted by Gimbernat's ligament. The constriction was cut, a large portion of the omentum removed, and the gut irrigated with warm water and returned to the abdomen. His convalescence has been uneventful.

I insist upon the wisdom of having every thing in readiness for a herniotomy before chloroform is administered. It is not right to subject such cases to the depressing effects of a second anesthesia. If taxis is employed at all it should not be continued beyond ten or fifteen minutes. Aspiration of the sac, Seuten's method of dilating the ring and canal with the finger, Langenbeck's plan of dilating after incision through the skin and subcutaneous fat, and Guerin's subcutaneous division of the stricture by means of a tenotome, are all dangerous and unsurgical, and have fallen into deserved disrepute. It is unsurgical to return the contents of the sac before it has been opened and every thing carefully inspected. For this reason the former popular practice of cutting the constriction and reducing the hernia without opening its sac should now, that we do not fear peritonitis as the result of operations, be abandoned.

We now come to the disposition to be made of the contents of the sac. All fluid, especially if it be turbid or offensive, should be carefully drained off so that none of it will find its way into the peritoneal cavity. If there be one or more pieces of omentum in the hernia, they may be returned (if in good condition) to the abdominal cavity, or ligated and removed. My experience leads me to prefer the former plan. If the latter is adopted, and oftentimes it will be necessary, I use chromated gut for ligating the stump. Silk, if large enough to control hemorrhage, may give trouble and lead to inflammation and abscess of the omental stump.

We owe this knowledge to W. T. Bull, of New York, who published a most excellent article upon this subject in the *Annals of Surgery* in 1893. He reported several cases in his practice. I have had one in my own, and saw another in the practice of a surgeon of this city. Ordinary gut, unless of large size (No. 4 or 5), does not give security against hemorrhage. It is not a sufficiently abiding material. Should small sized gut be used, it is then indispensably necessary to divide the omental stump into sections and ligate each separately.

Before ligating off the omentum it is well to be assured that no knuckle of bowel is contained therein. Many such accidents have been reported. In old irreducible epiploceles one will sometimes be in doubt as to the best procedure.

Adhesions low down in the sac can usually be separated by a blunt dissection; if not, they may be ligated and a small portion left on the distal side of the ligature. Adhesions at the internal ring and beyond are not so satisfactorily disposed of, and their careless separation may lead to unlooked-for hemorrhage after the wound has been closed and reaction established.

I encountered such a case four weeks ago in a patient of Dr. Samuel Woody. He had suffered for twenty-five years with an irreducible epiplocele. Bowel only descended when he left off his truss. Going without his truss, four weeks ago his hernia became strangulated late one afternoon. Dr. Woody was summoned at midnight, and, using taxis unsuccessfully, telephoned me to come prepared to operate. A large piece of omentum adherent to gut and sac was encountered. The adhesions to the bowel were tied in two places and cut between ligations. That portion of the omentum adhering to the lower part of the sac was removed by tearing and blunt dissection. In reducing the omental stump I found it to be adherent to the gut and peritoneum at internal ring and beyond. Rather than enlarge the wound, for it was already a long one, I left the adhesions as they were and contented myself with ligating and excising sac at a somewhat lower level than I usually do. I had seen Bull do the same thing in an operation at the New York Hospital, and as I operated the case came into my mind. At the time I thought his practice eminently wise. My case recovered without a symptom.

More important than dealing with the omentum is the question, What shall we do with damaged bowel?

The variety of hernia, its size and tenseness, duration of strangulation, amount of taxis employed, and above all the experienced eye and touch will decide whether or not it should be returned into the peritoneal cavity. When in doubt one may follow the plan of Schede and Czerny, and the gut be left *in situ*. Returning the gut to the cavity may favor its vitality, but it has the great disadvantage of multiplying the dangers of septic peritonitis. If it be returned in a questionable state it is well to secure it at the internal ring by transfixing the mesentery with a silk ligature, which is left conveniently in the wound. Should perforation occur one may reasonably hope that fecal matter and

gases will pass out of the wound instead of into the peritoneal cavity.

In case of undoubted necrosis of the gut two plans are allowable—the formation of an artificial anus which may be subsequently closed, or resection of the gangrenous intestine with end-to-end anastomosis, the bowel then being immediately returned to the cavity. The condition of the patient will decide the choice. While it is more ideal and surgical to resect, few patients will be in such condition as to permit of so prolonged an operation, attended as it invariably is by much additional shock. Statistics show the other plan to be the life-saving one, and after all life-saving surgery is ideal surgery.

Reichel showed that of 56 primary resections, 29, or more than 50 per cent., succumbed.

It is difficult to estimate the exact limits of necrotic bowel; and, further, should one reach reasonably healthy gut, union would be slow on account of diminished vitality. Sutures often cut their way out before union has occurred. Peritonitis must follow.

Improved methods of suturing, along with recent discoveries in the way of mechanical devices for facilitating intestinal anastomosis, may and doubtless have lessened the danger of resection. Still, I am not aware of any statistics which would warrant the statement that the danger of primary reaction has been markedly reduced.

Should the jejunum be gangrenous the more dangerous operation of resection is demanded. If it is not done the case is likely to perish from inanition. It is scarcely necessary to add that operations for strangulated hernia should be supplemented by an attempt at radical cure. Not only does it prevent a return of the hernia, but it also lessens the primary mortality of an operation by shutting off the peritoneal cavity from a possibly infected wound.

Mortality. It would not be proper to conclude my paper without a word as to the mortality attending herniotomy. Barring accidents, it is practically *nil.* There is no danger in an aseptic herniotomy. The danger lies in the condition of strangulation with its frightful results. Older authors estimated the mortality at from 25 to 40 per cent., not understanding that the

subsequent peritonitis was due to the effects of strangulation rather than to herniotomy done for its relief. During the past year I have operated six times for strangulated hernia, patients of Drs. W. E. Grant, D. E. Proctor, W. T. Carter, S. E. Woody, I. N. Bloom, and P. B. Scott, respectively. All recovered without an untoward symptom. The patients owe their lives not to me but to their family physicians who were so quick to recognize their peril and as prompt in invoking the aid of surgery. No time was lost in any of these cases by prolonged and death-dealing taxis.

TRUSSES AND THEIR APPLICATION.*

BY JAMES B. BULLITT, M. D.,
LOUISVILLE, KY.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

In the few minutes allotted me I desire to present for your consideration a few general observations regarding trusses and their application, and then a few trusses themselves.

It is a matter of great regret that physicians and surgeons too concern themselves too little with the application of trusses. This is principally for two reasons, ignorance of trusses and their proper application on the one hand, and an indisposition to take the required amount of pains and trouble on the other. This ignorance exists simply because few men, comparatively, have had an opportunity of acquiring a practical knowledge of the subject, for the proper application and maintenance of trusses are not things to be readily learned by the reading of essays on the subject only. The result of this combined ignorance and indifference is that patients suffering with hernia are recommended to the friendly apothecary or instrument-maker for a truss, with the selection and application of which the medical adviser seldom burdens himself. The patient is shown an assortment, and is invited to take his choice, which is not infrequently governed by the price, the graceful appearance, and the color of the article. To say that the apothecary and the instrument-maker know as much about the selection and application of trusses as the physician

*Read before the Louisville Academy of Medicine, January 21, 1895.

himself is a poor commentary on the latter, for the ignorance of the former of the anatomy of the parts and the pathology of hernia is attested by the number of trusses found applied over retained testicle, hydrocele, varicocele, bubo, and inflamed conditions of the testicle, and by the reversed pads, and the right-sided trusses applied to the left side, and *vice versâ*. The result of thus recommending patients to the druggist and instrument-maker is that their friends and acquaintances are often sent to the same people direct, and so never come under the hands of the surgeon at all. The injury thereby accruing to both patient and surgeon is readily seen. It is also significant that the large majority of strangulated herniæ occur from the pressure and irritation caused by an ill-adjusted truss pad and the viscus which has escaped beneath it. The importance of the truss question will be more fully recognized when it is considered that, while radical cure is effected in a certain percentage of cases operated on in any of the recognized methods, yet at the same time *all* cases so operated on are not cured, no matter what the method. This, taken in consideration with the fact that some individuals will always be shy of the knife, no matter to what perfection the cutting operation may be brought, insures the fact that the ruptured, like the poor, will be always with us. Therefore it becomes our duty to better educate ourselves to the application and maintenance of the truss, to the end that those who so suffer may receive from us the best and most scientific mechanical treatment. DeGarmo states that one fourth of adult cases can be cured by the properly adjusted truss. And on the authority of Dr. Vance we have it that the vast majority of cases of congenital hernia can and should be cured before the infant begins to walk.

The truss has two functions, one a positive and the other a negative one. Positively, it must so occlude the opening as to prevent the intrusion of the viscus; negatively, it must not irritate nor exercise a pressure sufficient to produce an atrophy of the parts lying between the truss pad and the hernial canal. It was the idea of the older surgeons that the truss pad should produce an irritation, the result of which should be a plastic exudation, to hasten the adhesion of the parts and so help the obliteration of the canal. The opposite result of atrophy is inevitable.

The proper idea is to have a flat pad to simply prevent the intrusion of the viscus into the opening, trusting to nature's tendency to effect its closure, as is effected after descent of the testicle.

The number of trusses in the shops are constructed on but two ideas, one the constricting body idea, as illustrated by the elastic truss, the French and the German truss; and the other the postero-anterior pressure idea, illustrated by the Hood pattern of truss. The principle of pressure postero-anteriorly is the only correct one, and all body constricting trusses, especially elastic trusses, should be discarded, as every movement affects the relationship of the body and the pad. With postero-anterior pressure from the sacrum behind to abdominal rings in front there is no constriction of the body, the pressure can be graduated exactly, and the relation of pad to body remains constant. In applying a truss something of the anatomy of the parts and of the nature of hernia should be explained to the patient, as the successful wearing of the truss is exactly in proportion to the intelligence and care of the patient. They nearly all have a preconceived idea that the place for the pad is close down to the pubic bone. The pad of the German truss has to be applied in this position, another reason for discarding it. We all know that the pad should be applied in oblique hernia directly over the internal ring and supporting the canal below, so as to prevent entrance of the viscus into the canal at all. This point is to be explained to patients and insisted on again and again. In direct inguinal and in femoral hernia the pad has of course to be applied respectively lower down and closer to the pubic bone. Femoral hernia is the most difficult of all to hold, but like the other two is best held by a postero-anterior pressure truss.

In children the same form of truss applies. Up to about two years, on account of constant soiling and the recumbent posture, it is found most practicable to employ an ordinary T bandage, made of Canton flannel, doubled and quilted, and applied over a pad made of the same material or of adhesive plaster. Several of these are kept always on hand, so that as soon as one is removed for washing another can be applied.

It is scarcely necessary to speak of umbilical hernia, as the button and adhesive plaster strap are well known to all, and for children are the very best appliance. I have had one case of

umbilical hernia in an infant cured in eight days. An inflammation was set up beneath the pad, and this resulted in complete and rapid occlusion of the opening. But this was an accident purely, and not one I would endeavor to repeat. However, when an inguinal hernia is hard to hold, especially in young subjects, Heatonian injections of white oak bark along the course of the canal are frequently of decided service. They produce an exudation of plastic lymph that serves to materially assist the mechanical action of the truss pad in occluding the opening and canal.

West Chestnut Street.

STAMM, M., FREMONT, OHIO: GASTROSTOMY BY A NEW METHOD. (*Medical News.*)

After reviewing the various methods now in vogue the writer proceeds as follows: Some experiments on dogs have suggested to me a plan of procedure based on sound anatomic principles, and which, if not better than Witzel's method, is at least equally as good.

The first steps of the operation are the same as Witzel's, an incision about three inches long being made along the left border of the ribs. The point for the introduction of the rubber tube is marked with the knife by a slight incision simply through the serous coat of the stomach. Around this point as a center, and at a radial distance of a little over an inch, a purse-string suture is introduced by means of a straight needle and strong silk, and including only the serous and muscular coats of the stomach. The opening in the stomach for the rubber tube is made next, about the thickness of a No. 15 American scale catheter, and the tube fastened by a silk or catgut suture. The purse-string suture is now drawn together, and there results a double sphincter, which will guard against any leakage from the stomach. With about six interrupted sutures the stomach is stitched to the parietal peritoneum, and both ends of the purse-string suture, which so far serve to hold and steady the stomach, are now armed with needles and passed through the entire thickness of the abdominal wall on both sides of the wound and then tied in a loop. This arrangement will anchor the stomach firmly in position, and the suture can be removed in eight or ten days.

Clinical Memoranda.

A CLINICAL LECTURE.*

BY PROF. JOSEPH M. MATHEWS, M. D.,
Professor of Surgery and Clinical Lecturer on Diseases of the Rectum, Kentucky School of Medicine.
LOUISVILLE.

REPORTED BY WM. V. LAWS, M. D.,
Clinical Assistant.

Gentlemen, we have presenting to-day a variety of rectal cases:

Case 1. This young man, that is now being anesthetized, gives the following history: About four months ago he entered the City Hospital suffering from a rectal abscess, which was lanced by one of the internes. However, a fistula resulted. He now enters this hospital complaining of constant pain, accelerated by the act of defecation. If this pain existed only in connection with the movement of the bowels, we would be inclined to think that he was suffering from a *fissure*. You know that the characteristic if not the pathognomonic symptom of fissure is pain coming on at stool or directly afterward, and lasting from a few moments to many hours, according to the break in the tissues. But the patient says he suffers *constant* pain, which is increased when his bowels move. In connection with this, he complains that a discharge stains his clothing. The fact that he had at one time a rectal abscess, followed by a fistula, which too was operated on, still leads us to suspect fistula, or rather an unhealed sinus. Upon examination I found, on opening the anus, what looked like a well-defined break in the mucous membrane, or, in other words, a fissure. But by inserting a probe along the line of this tear I found that it entered a distinct channel. Therefore we have here what might be called a combined fissure-fistula. You will notice that it is situated dorsally.

The anesthetist says that he is now ready. I wish to call your attention to the fact that it requires profound anesthesia to

*Delivered at the Kentucky School of Medicine Hospital, March 3, 1895.

do any operation around the rectum and anus. An eye could be enucleated with a less amount of chloroform given than a pile could be tied. The assistant will now wash the surrounding parts well with soap and water. . . . I introduce this dilator well into the rectum and open it to its full capacity. This is done to put the muscle at rest, and also to allow us to see within the rectum. This grooved director I push through the channel, and it runs at least two inches up the mucous membrane. There is but little tissue involved. The slight tissue along with the membrane is now divided. A search for other channels reveals none. I take it that this sinus was overlooked by the first operator. This piece of iodoform gauze is neatly and firmly laid in the cut. This sinus will soon heal from the bottom.

Case 2. This woman is twenty-eight years of age, and has borne one child. She gives a clear history of having had syphilis. I should speak more properly were I to say, *has* syphilis. Her rectal symptoms are mainly constipation and a discharge of pus. I have not examined her, but will now do so under chloroform. My finger enters to the distance of about two inches, when it meets with an obstruction. This obstruction is a stricture that barely admits my finger. By using some force it has gone through, and meets with another constriction somewhat larger in circumference than the first. The gut is greatly ulcerated both above and below these strictures. It is self-evident to my mind that the cause of this condition is syphilis. I shall now proceed to break these strictures by forcible and rapid dilatation. You will notice that it requires force to make the dilator go through the first opening. It has now entered to its full length. This is a heavy instrument, and I want you to observe how very much force it takes to break the strictured surface. This is a point that indicates the cause; if it were a cancerous stricture it would give way with much less force. The evidence given to the touch indicates that it is not a benign stricture. I have now broken the strictures to the full size of the normal gut. This may appear to be a simple procedure, but it is fraught with some danger. Indeed most all authors on this subject suggest gradual dilatation instead of forcible, because of what they are pleased to call the great danger in the latter. My experience has convinced me that much of this danger is chimerical. Of course you might have

some shock, and it might be so that a serious hemorrhage would result. I have never seen much of the former, and but few cases of the latter. Although I see no bleeding vessels in the gut, I shall take the precaution to plug the rectum. Please notice this hard gutta-percha tube. It is about five inches long. I insert it into the rectum, and all around it I pack firmly, with dilator still inserted, with iodoform gauze. It is now complete, and the instrument is withdrawn. The tube is inserted for a two-fold purpose: First, to allow the passage of the gases; second, to be a guide to any hemorrhage that might occur. I do not usually plug the rectum in this manner, but prefer the method described in my book on Diseases of the Rectum. This woman will be put to bed, and carefully watched for hemorrhage. The plug will be removed in four days, and her bowels be allowed to move. Every day thereafter for some time the rectum will be irrigated.

Case 3. This gentleman has come a long distance to be operated on in this hospital. He gives a history of slight cough, and some emaciation. No cavity can be detected in his lungs. He has an ugly fistula in ano which we propose to operate on. While he is being anesthetized I desire to bring out one point especially. If this fistula is of tuberculous origin, as I have no doubt it is, a very different operation will have to be done from the ordinary. Instead of making it suffice to divide the tracts and pack with gauze, it will be necessary to curette the whole surface involved. From modern research it is well known that the seat of infection may be in any portion of the body, and that from this local foci the *tubercle bacilli* may travel and cause a general infection. It used to be thought that *fistula in ano* in the tubercular patient should be left alone. It is now known to be true that of all forms of fistula they require the speediest attention.

He has taken chloroform nicely, and now you can see the parts from where you sit. The tissue here on the left is of a peculiar bluish color, and the external opening is an ugly one. Making a cut here in line with the opening, you will notice that I can introduce my finger easily, and sweep it around in the tissues to about one and one half inch in circumference. I will now trim all the skin away from this infected part. Notice, please, that the depth is not great. The director runs down at this point into the bowel; it enters just this side and does not include the

sphincter muscle, a very fortunate thing, especially in a subject like this. With the knife I now divide the tissues held on the director. The edges here are flabby, and fall into the wound. I will trim them off freely for two reasons: First, that they might not impede the healing process; second, because they are infected with the *bacilli*. We now have a clear wound, but the operation is not near complete. This whole surface I will now curette. You observe this is a heavy instrument, and that I use it freely. The bottom has been reached to healthy tissue all around, and the wound will be dressed with iodoform gauze, cotton, and a bandage. I have asked the nurse to irrigate constantly while I have operated with a solution of bichloride of mercury, 1–5000. We should be careful not to confine a patient like this to bed any longer than is absolutely necessary. This man will be allowed to walk around the hospital in less than one week. If the wound is slow to heal, the nurse will dress it daily with iodoform gauze, saturated with *compound tincture benzoin*.

Case 4. I will ask Dr. Buechel to anesthetize the fourth patient. It is a man, about forty years of age, who was admitted to the hospital yesterday from the country. He gives a history of protruding internal piles, no bleeding, and but little if any pain. It has become a burden to him to push back the mass that protrudes after every act of defecation. He has been prepared as all patients are here—a purgative last night, a bath and enema this morning; of course no breakfast. I listened at his heart in the ward, but could detect no lesion. Dr. Green will wash the parts thoroughly with soap and water. With this divulsor I open the rectum, and the nurse flushes the same with the mercuric solution. The piles are now partly protruded, but not to their full size. I catch hold of this large one in front with the forceps and draw it fully out. I do not attempt to make the incision into the so-called white line of Hilton, but cut freely into the true skin at the outer surface where it is superfluous. The tumor now hangs loosely, and I transfix it after the manner of Van Buren. Each ligature has then only one half of the tumor to cut through. The anesthetist says that both respiration and heart have ceased. . . . Gentlemen, I am very sorry for the patient's sake that he has had such a narrow escape from death; but the occurrence has afforded you an opportunity to witness that which

is liable to occur to any of you, a rescue from death from chloroform poisoning. The assistants here have fought nobly; while one kept up artificial respiration, another gave first a hypodermic injection of $\frac{1}{100}$ gr. nitroglycerine, also $\frac{1}{20}$ gr. strychnia and whisky injection during the time of resuscitation. The anesthetist tells me that he noticed trouble in the anesthetic room, and gave him hypodermic injection of $\frac{1}{100}$ gr. nitroglycerine before he was rolled in here, so he has taken $\frac{1}{50}$ gr. of this drug. During time that artificial respiration was practiced his tongue was held by forceps and drawn out of the mouth.

Now that he has recovered, we will quickly ligate the three remaining tumors without chloroform. The same plan is pursued as with the first. After all were ligated each tumor was caught up with forceps and cut off close to the base. The assistant will now dress the parts with iodoform gauze, cotton, and a bandage. The ligatures will separate in about seven or eight days, and he will then return home. I should remark that the time taken to resuscitate this patient was sixteen minutes.

THREE CASES OF END-TO-END ANASTOMOSIS IN LARGE INTESTINE BY MURPHY BUTTON; TWO RECOVERIES, ONE DEATH.

BY HOWARD LILIENTHAL, M. D.,
Assistant Surgeon to Mt. Sinai Hospital, New York City.
NEW YORK.

[Written for MATHEWS' MEDICAL QUARTERLY.]

These cases are now reported together because of certain lessons which they may teach. Case number one has been reported in full in the *New York Medical Journal* for September 1, 1894, and the patient was shown alive and very well, having gained thirty pounds, at the November 12th meeting of the Surgical Section of the New York Academy of Medicine. The second case was a fatal one, and it is now for the first time published in full. The third patient remains well, and has been presented at a recent meeting of the Harvard Medical Society of New York.

For the sake of completeness a very brief report of the published case (No. 1) will be given:

Case 1. J. C., fifty-one years old, was emaciated and cachectic from a carcinoma of the transverse colon stenosing the lumen of the gut. Tumor as large as a large egg was removed, under chloroform, on June 18, 1894, and much adherent great omentum as well as six inches of colon were also excised. A button one and three quarter inches in diameter (made to order) was used to effect approximation. The central canal of the button was large enough for the passage of feces of average consistency. The button segments were so large as to fit very tightly in the gut. Maximum temperature 103°+ the next day, but there were no signs of peritonitis. Opium in full doses was used until the sixth day, when patient's bowels moved after a high enema. Full diet was permitted after the tenth day, and the button passed without trouble on the eighteenth day.

Case 2. Jennie F., aged twenty, and unmarried, was admitted to the Gynecological Department of the Mt. Sinai Hospital on July 4, 1893, suffering from an abdominal abscess. Ten days later, with the hope of removing the tumor, Dr. Brettauer, acting gynecologist, made a median abdominal section, but finding the mass adherent to the right lower part of the belly wall the incision was closed, and on August 2d she was again anesthetized and the abscess was incised in the right iliac region. The sinus resulting from this operation persisted, and the patient was transferred to the surgical department, where she was in my charge. About six weeks after the second operation I tried to dissect out the sinus, thinking that it might be due to a diseased appendix vermiformis, but after a tedious operation of about an hour and a half the sinus tore, and at the advice of Dr. Mundé, who was present, I accomplished drainage from the anterior wound into the vagina. The vaginal opening soon closed, however, and the original sinus remained in much the same condition as it was when I first saw it. The patient's general health was running down, so, on December 16th, Dr. Gerster made an attempt to dissect out the sinus and follow it to its source. After working for more than two hours the operation had to be stopped because of a wound into the rectum. A piece of iodoform gauze was left in the wound as a drain, and the patient recovered after

an attack of peritonitis, but the sinus was now converted into a fecal fistula, which indeed it may have been from the beginning.

On April 16, 1894, nine months after her first operation, I again anesthetized the girl, intending to drain by the sacral route, after the manner adopted by Dr. Gerster with success in a similar case. My patient was placed in the prone (Bozeman's) position, and the coccyx was removed as a preliminary step, when she suddenly collapsed, evidently from the chloroform. A blunt probe was now hastily introduced into the anterior wound and at once entered the rectum, from which it was unintentionally passed to the coccygeal region of the wound, and being cut down upon a second fistula into the rectum was established. I hoped that this lower and simple opening might take the place of the other more complicated one, but in this I was disappointed, for it rapidly closed, the upper original sinus persisting as before, a fecal fistula. Colotomy was now proposed, with the hope that the sinus no longer infected by feces from the rectum might close of itself. About four weeks later a left inguinal colotomy was performed by me, and for about four months the patient improved in general condition. The sinus into the rectum still existed, and the girl, giving up all hope of cure, begged that the colotomy wound be closed. This I tried to do on September 14, 1894. The patient was chloroformed, the artificial anus was plugged with gauze and temporarily sewn up, and the knuckle of colon containing the anus was dissected out and excised, about two and a half inches in all. It was noted that the lower segment of gut was considerably atrophied, and the button, which was of the same size as the instrument used in Case 1, distended the intestine's lumen very considerably. With Case 1 in mind I trusted that all would be well, and as the patient had given me constant anxiety because of her wretched anesthesia, I hastily closed the abdominal wound *without a drain*. The next day there was moderate fever and rather troublesome vomiting. The temperature subsided, but the vomiting was more or less constantly present, and continued till the seventh day, when the patient collapsed after a sudden rise of temperature to 105° F. She had previously received enemata, which were effectual in bringing away soft fluid stools without pus or blood.

The same day a mural abscess was evacuated without anes-

thesia, the patient dying that night. Autopsy through enlargement of the wound showed feces and pus in the peritoneal cavity, with the button partly outside the gut. I was unfortunately not able to be present at the examination, so am unable to say just where the button came through, but I believe it must have been through the lower and thinner segment, which probably necrosed because of direct pressure (distension) by the button. The patient was so weakened by her many operations and the long suppuration and confinement in the hospital, that her tissues had not sufficient vitality to resist the strain.

CASE 3. S. O., a married woman, forty-four years old, was admitted to the gynecological ward of Mt. Sinai Hospital, in May, 1894, because of a pelvic tumor, apparently starting from the sacrum. Her symptoms were referred to the rectum. There was an almost constant tenesmus which gave her no rest by day or night. Nothing abnormal was seen in the stools except slight increase of mucus, very probably from straining. The tumor, which was regular in outline and plainly felt through rectum or vagina, sprang from the anterior surface of the sacrum and was thought to be a sarcoma. It was not large enough to in the least occlude the rectum. Under chloroform I incised the abdomen in the left iliac region over the colon, and after examining the tumor from within, I performed colotomy in order to give rest to the rectum and to prolong the patient's life, for although the growth felt like an exostosis the patient's symptoms had been constantly increasing in severity for several months, and a final filling up of the pelvis was expected. The woman was immediately relieved; the rectal irritation vanished in the course of a few weeks, but the tumor remained unchanged in size.

On September 4, 1894, about four months from the original observation, she was readmitted for closure of the artificial anus. She had gained in flesh and strength, and begged to have the opening closed. Remembering the sad ending of Case 2, I had another button one and a half inches in diameter made, and on September 24th, in the presence of Drs. J. M. Mathews and H. H. Grant, of Louisville, I chloroformed the woman and had dissected out the greater part of the anus-bearing knuckle of colon, when with little warning the patient became cyanotic, with no pulse and no respiration. She was with the greatest difficulty

resuscitated. This took so long that it was thought best to postpone the completion of the work, and indeed it was more than an hour before it was considered safe to leave the bedside.

Three days later, on the 27th, under ether, which the patient took very satisfactorily, the operation was finished. Its difficulties were much increased, for the intestine had retracted into the belly, and the iodoform gauze packings, which were left in to protect the peritoneum from fecal soiling, were very firmly adherent, and when they were removed the entire surface bled freely. In this case also the lower segment of intestine was markedly atrophied. The button anastomosis was easily accomplished, but fearing a repetition of Case 2 a piece of iodoformized gauze was left as a drain from the line of anastomosis through the lower angle of the external wound. Four days later the wisdom of this procedure was proven, for when the yellow gauze was removed a stream of thin fecal pus followed.

On October 17th, twenty days after making the anastomosis, the button loosened but stuck at the sacral tumor. Dr. T. D. Tuttle, House Surgeon, delivered it through the anus with a long forceps guided by his finger. The subsequent history of the case was uneventful, the fistula closing entirely in a few weeks. At the present writing (March, 1895,) the patient is well, and she has had no return of her rectal trouble. The tumor is as it was, and is, I think, a stationary osteoma or a very slowly-growing sarcoma.

From my experience with the button I have concluded that, on the whole, the most rapid and safe method of end-to-end intestinal anastomosis known to me can be accomplished with its aid.

If accidents happen I believe that one should be sure, before laying the blame upon the instrument, that all proper and necessary precautions were taken.

The button should never fit *tightly* into the gut lumen.

In all doubtful cases gauze drainage from the line of union should be employed.

The danger-signal after operations of this kind is less pain and fever than *persistent vomiting*, the cardinal symptom of strangulation of any abdominal viscus.

33 East Thirty-first Street.

DIVULSION OF THE SPHINCTER ANI IN BRIGHT'S DISEASE: A CLINICAL CASE.

BY W. H. WALLING, M. D.,
PHILADELPHIA, PA.

[Written for MATHEWS' MEDICAL QUARTERLY.]

A patient, suffering from Bright's disease, was also greatly afflicted with excessive hyperesthesia of the vagina and rectum. Defecation was painful and difficult. Micturition was also painful, being aggravated by carunculous growths at the meatus. These latter were removed, and the irritation treated with aristol, introduced into both the cavities, either in the hollow suppositories of Hall and Ruckel, or in gelatine capsules, preferably the former. Later on a mixture of aristol, bismuth, subnitrate, and oil of sweet almonds was used, especially in the rectum, where it was supposed one or more ulcers existed. About half a fluid ounce of this mixture was thrown into the rectum every night, with a very soothing effect, but the condition did not yield sufficiently, and, upon consultation with one of our ablest surgeons, divulsion of the sphincter ani was decided upon and carried out. A very small ulcer was found and acted upon with the galvanic cathode for a few minutes, with a current intensity of five milliamperes. This ulcer did not seem to be sufficient in size to produce the pain and irritation complained of, the rest of the mucous membrane being in a healthy condition.

The patient was constipated, as would be natural under the circumstances. The divulsion relieved this condition temporarily only.

The percentage of albumen was only about one half of one per cent.; this amount increasing somewhat according to diet and other conditions.

It has been asserted by some surgeons that this operation, if it may be classed as such, exerted a very beneficial effect in Bright's disease. The claim was, I think, that this effect was due to the stimulation of the sympathetic nerve. Whatever may have been the result in other cases, there was no benefit derived in this, in any way that I could perceive, commensurate with the discomfort attending and following the operation. The only permanent

result was a weakened condition of the sphincter, and a tendency to prolapse during and after defecation, which still remains.

For a time the distressing symptoms attributable to an ulcer were somewhat alleviated, but they soon returned, and still require more or less constant attention. The aristol mixture seems to afford the most relief, but nothing removes the trouble entirely. It would seem to be dependent upon the general health, and when the patient can be kept up by tonics, and the bowels kept soluble, the irritation is greatly lessened.

The treatment in the case has consisted in a nourishing diet, such as has been acceptable to the patient, with iron in some form, strychnine arseniate, gr. $\frac{1}{67}$ to gr. $\frac{1}{50}$, three times a day, latterly increasing the number of doses as seemed to be necessary, and glonoin, gr. $\frac{1}{250}$ to $\frac{1}{125}$, with the strychnine. Oxygen has also been administered, giving as high as twenty gallons in a day, with great benefit.

Electricity has been most serviceable in this case, doing as much perhaps as any one other agent to relieve the general depression.

Divulsion of the anal orifice having been recommended for so many ailments, I desired to give my patient the benefit of such procedure, especially as other conditions seemed to warrant it, but the result has not been satisfactory, either to the patient or to myself. I do not, however, condemn such operation, as there are doubtless many conditions where it would be of great benefit.

I should like to hear from men of experience on this subject, especially with reference to rapid divulsion of the sphincter ani in collapse from anesthesia in opium narcosis, drowning cases, or syncope from other causes.

Society Reports.

LOUISVILLE ACADEMY OF MEDICINE.

At the regular meeting of this Society the paper of the evening was read by Dr. August Schachner upon "The Murphy Button, with a Report of an Unsuccessful Cholecystduodenostomy." The paper enumerated the objections which different surgeons have raised against the device and the evidence which had been gathered to support the objections.

The objections were as follows:

1. The contraction of the opening, especially in a side-to-side anastomosis.

2. The button acting injuriously by assuming the rôle of a foreign body.

3. The possibility of the button causing trouble by becoming arrested at the ileo-cecal valve.

4. The chances of the button dropping in the wrong direction; *i. e.*, into the stomach in a gastro-enterostomy, or into the isolated loop of intestine in an intestinal anastomosis.

5. The possibility of the button not disengaging itself or of becoming arrested in some part of the intestinal tract.

6. It makes the patient dependent upon the craft of the cutler rather than the skill of the surgeon.

In concluding the writer remarked:

"These objections have been reviewed not with the intention of waging a war against the button, nor does the raising of objections against a new departure necessarily indicate a weakening of the same. But since they have been made it becomes our duty to consider them impartially and to act cautiously. If the Murphy button is possible under certain conditions of creating harm, we are anxious to know just what the conditions are and their chances of occurrence, and then the rest will be plain sailing.

"The fact that a certain accident has occurred once, forever settles any doubt that may have existed as to the possibility of its occurrence, and forever places it within not only the possible but also the probable range of re-occurrence, and the question

then resolves itself into, What are the chances for this accident to occur?"

As for the unsuccessful termination of the cholecystduodenostomy the author remarked that the post-operative behavior of the patient was such that the death could not be fairly counted against the button.

DISCUSSION.

Dr. W. H. Wathen: I was very much interested in the history of the Murphy button up to date and in the report of the case. I have not used the button, and do not believe it will become the universal practice with surgeons, because of the objections which have been alluded to in the paper, and possibly others that will finally be brought out. It is condemned by many refined abdominal surgeons as an unscientific piece of surgery, and they prefer the older methods of anastomosis. I noticed that shortly after Murphy gave his button to the profession it was criticised by a number of men who had had a very large experience in intestinal surgery, notably Dr. Senn.

The cause of death in the case reported was probably leakage into the peritoneal cavity from the bowel, and not from hemorrhage. Had the patient remained perfectly quiet, and been obedient in every particular, and had there been no nausea that caused efforts at vomiting, the bowel might have been held firmly enough to have protected the patient against leakage.

Dr. Schachner: I do not desire to place this case on record as a failure for the Murphy button. Under the same circumstances there is a likelihood that other methods would have met with the same result.

Dr. J. B. Bullitt: The *Medical News* of to-day contains an article by Murphy giving statistics of all cases operated, and it is certainly very flattering. Speaking of gastro-enterostomy for malignant disease, there is a total of 27 cases with 9 deaths. There have been 37 cholecystduodenostomies reported by 22 different operators with 37 recoveries. In 41 resections for malignant disease there have been only 2 deaths. And if to these be added 6 cases operated upon by Dr. Joseph Price, but not yet published, we have a total of 48 cases with 2 deaths.

Dr. A. M. Vance: I have had no experience with the Murphy button. Theoretically I did not fancy it. I have had only one

case in my practice lately in which the button might have been used, and that case recovered under the suture. I believe that we ought to take the enthusiastic statistics of Murphy with a grain of salt. I believe he is too enthusiastic, but entirely honest in his reports. In considering the value of the button we should also take the work of the average surgeon, and not that of Dr. Murphy as the operator. Another point mentioned by Dr. Schachner is the large number of unsuccessful cases not reported. All the objections brought out may actually occur, and taken as a whole they amount to a good deal. I believe the suture is far better surgery. I think Dr. Schachner's experience in experimental surgery on dogs will also teach him that this is the case.

In regard to the constriction that is said to follow end-to-end anastomosis, I do not believe that it occurs. I have demonstrated that six weeks after resection of the small intestine there was no narrowing at the place where the sutures were introduced. The surplus invagination is digested or disposed of somehow by nature. The most perfect case for the use of the button is in cholecystduodenostomy, but I would hesitate in using it anywhere. But I might change my mind if I saw Dr. Murphy use it.

Dr. W. L. Rodman: I have carefully read the paper so largely quoted from by Dr. Bullitt, and it contains a very complete resumé of all the successful cases reported, and makes a most flattering showing for the operation. After reading that report one will necessarily come to the conclusion that the successful and not the unsuccessful cases have been published. In that same article it is said that the operation is not so successful when done for malignant disease. Further, Dr. Murphy expresses a preference for the posterior operation (Von Haecker's method in gastro-enterostomy), for the reason that Willy Meyer and others have had the button pass backward into the stomach. The most surprising part of the paper was the success of operations for intestinal obstruction. He says that there have been 16 cases of resection for obstruction reported; of these 15 recovered and 1 died. Another remarkable statement is that in gangrenous hernia there have been 14 operations with 12 recoveries. The mortality by other methods has been 50 per cent. Another

statement equally as remarkable is that when the operation was done for fecal fistula all the cases did well.

It is very clear to me that the Murphy button is one of the most beautiful and ingenious of surgical devices, and that it is most valuable in intestinal work. It will always have a good place in cholecystduodenostomy.

Another point brought out by Abbé and admitted by Murphy is that one must be very careful in selecting the size of the button. Abbé had a case of gangrene followed by death from using too large a button.

There have been many objections to and criticisms of the Murphy button of late, and it is now reasonably certain that its field of usefulness is to be somewhat more restricted than it was formerly thought. That it has come to stay, however, seems beyond question.

Dr. Bullitt: In regard to the value of statistics in these cases, it is a well-known fact that Louisville is not typical of all the cities in the country, in that we are less likely to report failures than the surgeons in the East, and particularly in New York. Their statistics will give an idea of the capabilities of the operation done by the best operators; and while the statistics of the enthusiastic inventor, as stated by Dr. Vance, must be taken with a grain of salt, it must not be too big a grain. Dr. Vance thinks that many would be more willing to try the operation if they were more skilled in the technique. Instead of being an objection, that is something in favor of the operation. The application of the button requires less skill than suturing.

Dr. Vance: One of the defects that has been pointed out in the Murphy button, and perhaps causes the great number of failures, is that it sometimes drops back on the proximal side of the anastomosis. This might be overcome by fastening a skein of silk or piece of gauze to the distal side of the button and allow the thread to hang down in the bowel. The peristaltic action of the bowel might insure the dropping of the button on the distal side.

Dr. Schachner: I think the point that Dr. Bullitt has made is a good one, as going to show what the button can do under the most favorable circumstances. The chances of the button passing backward into the stomach or failing to pass the ileo-cecal

valve are things that no one can prevent. If these are faults of the button, we want to know in what proportion of cases these accidents are likely to occur. When we know this, and the chances from other accidents, we can determine exactly the patient's chances for recovery. The suggestion made in the paper can be used to good advantage in certain cases. There should be a special clamp, made on the principle of the pedicle clamp, with a projection up and out when closed. Two holes are drilled in the cylinder, and with these we have control of the button and can press it through the intestinal wall; it hugs the cylinder and can not slip away. When the intestine is friable the purse string becomes loose, and we are at the mercy of an insecure grasp. I have tried the method on a dog, without the special clamp, using a mouth-tooth hemostat. If in intestinal anastomosis the purse string suture slips, every thing is torn out and we have a large hole and perhaps no other button. Through this very opening we can insert the button and push it down, making the anastomosis lower. We can work deep down in the abdominal cavity, when it may not be wise to draw the intestine out, then we can use a long clamp.

In the case reported I believe that death was due to sepsis from escape of fecal matter.

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. II. LOUISVILLE, APRIL, 1895. No. 2.

JOSEPH M. MATHEWS, M. D., - - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

AMERICAN MEDICAL ASSOCIATION.

The American Medical Association will meet in its forty-sixth annual session in Baltimore, Md., on Tuesday, Wednesday, Thursday, and Friday, May 7, 8, 9, and 10, 1895, commencing on Tuesday at 10 A. M.

Every indication points to a most successful meeting. The able chairman of the Committee of Arrangements, Dr. J. J. Chisolm, of Baltimore, having a corps of workers to assist him, will see that nothing is lacking to make it an enthusiastic as well as successful meeting.

To become a member of the American Medical Association, one shall make application in writing to the treasurer, and accompanying such application a certificate of good standing signed by the president and secretary of the society of which he is a member, and the amount of the annual subscription fee, five dollars. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

Delegates to the Association are appointed from permanently organized State medical societies, and such county and district medical societies as are recognized by representation in their respective State societies, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

The addresses this year will be delivered by Dr. William E. Quine, of Chicago, on General Medicine; by Dr. C. A. Wheaton, of St. Paul, on General Surgery; by Dr. H. D. Holton, of Brattleboro, Vt., on State Medicine.

Blank applications for membership in the Association can be had at the *Journal* office, and it is urged that all of the readers of the QUARTERLY will become members, if they are not already so, and attend the meeting in May.

UNJUSTIFIABLE SURGERY.

Some time ago a professor in a medical college related the following: A surgeon lecturing in said college visited his office to request his influence in inducing a colored man (an old family servant) to go before the class and have a surgical operation performed. The first mentioned physician replied that the operation was unjustifiable, in his opinion, for the reason that the growth was a malignant one, too far advanced to think of any operative interference. Said the surgeon, in response, Why, of course, the operation would do no good, but the case would make such a splendid *clinic*.

Whether this story was told in truth or jest it points a moral. It can not be denied but that many operations are performed upon patients that are compelled to go into charitable institutions, that were best let alone. Within a very short time there was done, in the operating-room of one of the largest hospitals in the East, three surgical operations during one afternoon, each one predicated upon a false diagnosis, and each one plainly unjustifiable. But this unwarranted surgery is not confined or limited to public hospitals and charitable institutions. One only has to attend a few meetings of medical societies, wherever held, to be convinced that many cases occur in private practice or private hospitals, that upon close criticism of the reports made would have been better if left alone.

It is to the credit of American surgery that a halt has been called and reason is taking the place of hasty action in much of this practice. It is true, very true, that *conservatism* in surgery

often means quick action, or the opportunity to save life is lost. But these are exceptional cases, and in many of these it has not yet been definitely settled whether to wait or not to wait is conservative. To read in the medical journals of this wonderful piece of surgery, and that good operation, of this man's special operation, and that man's modification, smacks much of the reports of the patent office, where every inventor is trying to outdo or improve upon the other. The saving of life and the benefiting of the afflicted should be the aim, the only aim of the surgeon, not the vainglory that is to be achieved by reporting more cases than a brother surgeon or doing a bloodier piece of work. A German surgeon reported a short time ago that he had removed the entire rectum, including the prostate gland and the sigmoid flexure, for a malignant growth. It is to his credit to say that he left the stomach and liver.

A lady recently seen, fresh from a surgeon's hands, was minus her womb, ovaries, tubes, and two inches of her rectum. It is fair to say that the gentleman who did the operation was a homeopathic surgeon, and the diagnosis in the case was a displaced uterus, accompanied with reflexes. This being *homeopathic* surgery, what *organs* would have been left had she engaged a regular surgeon to operate, who would *cut* in proportion?

To our shame it is said that we are given to *fads* even in surgery, and that these soon *die*, as do the patients. "Be sure you are right, then go ahead," is the wise maxim of the honest surgeon, and in his hands neither the poor nor rich will suffer. A surgeon should be a man of firm convictions, 't is true, but these convictions should be tempered with a good knowledge of what he is doing, and with a feeling of pity for the afflicted.

KENTUCKY STATE MEDICAL SOCIETY.

From a time to which the memory of man runneth not to the contrary, Harrodsburg has been known as one of the oldest and best towns in the State, with a population the most cultivated, chivalric, prosperous; every one seemingly filled with the sweet

amenities of life. To-day it is no less distinguished than in the past for its beautiful women and handsome men. Time, also, has consecrated historic spots and the surroundings of great men in this part of the moral vineyard.

The Kentucky State Medical Society, whose fortieth annual session is to be held in this venerable town on June 12th, 13th, and 14th, will be the guest of this good people, public spirited, ready with open arms to receive the stranger within their gates, or to further any project which will redound to the interest of and give *éclat* to their well-loved city, furnished as it is with all the conveniences and most of the luxuries of any metropolis.

We devoutly wish the "Fortieth Annual" to be a memorable meeting, full in numbers, coming together as we will to perfect ourselves in the science of a profession which distinguishes the doctor among all men, and to renew the ties of friendship and fraternal regard that so closely bind him and his brethren together.

We are fully assured that the committee, composed as it is of every reputable physician in the county of Mercer, with Dr. E. M. Wiley as chairman, will perfect the arrangements to the best of their ability, and afford the utmost convenience, comfort, and pleasure to the delegates and guests of the ancient and honorable Medical Society of the State of Kentucky. We are glad to say that matters are looking well, and we expect the Society to show up in great shape early in June.

From the Secretary we learn that the programme is filling rapidly. There will be no dearth of papers. Those contemplating the subject should at an early date send their "titles" to Dr. Bailey, Permanent Secretary, Stanford. We present herewith the special subjects for discussion, selected by the Committee on Questions, and we will not forbear saying that more pertinent texts and better equipped appointees could hardly have been found in a medical society of "400," where, as in the Kentucky State Medical, each vies with the other in point of ability, tact and wisdom.

WEDNESDAY, JUNE 12TH, AFTERNOON SESSION, 2 O'CLOCK.

Diphtheria.

Sanitation, Wm. Bailey, M. D. Louisville;
Pathology and Bacteriology, Carl Weidner, M. D., Louisville;
Diagnosis and Local Treatment, W. B. McClure, M. D., Lexington;
Sequelæ and General Treatment, Thos. Hunt Stucky, M. D., Louisville.

THURSDAY MORNING, 9 O'CLOCK.

Hernia.

Anatomy and Radical Cure, W. L. Rodman, M. D., Louisville;
Diagnosis and Treatment of Strangulated Hernia, W. O. Roberts, M. D., Louisville.

AFTERNOON SESSION, 2 O'CLOCK.

Obstetrics.

Ante-Partum and Post-Partum Hemorrhage, A. D. Price, M. D., Harrodsburg;
Craniotomy, Symphysiotomy, and Cesarean Section, John G. Cecil, M. D., Louisville;
Extra-Uterine Pregnancy, David Barrow, M. D., Lexington.

MR. ALFRED COOPER.

Mr. Alfred Cooper, whose portrait accompanies the present issue, is the well-known and popular Senior Surgeon to St. Mark's Hospital for Diseases of the Rectum in London. He is a Fellow of the Royal College of Surgeons of England and of Edinburgh, and is Consulting Surgeon to the West London Hospital. For services rendered, while on a visit to St. Petersburg, to members of the Royal Family of Russia he was made a Chevalier of the Order of St. Stanislaus by the late Emperor of Russia, Nicholas I. For many years Mr. Cooper was Surgeon to the London Lock-Hospital, and he is a recognized authority in this department of surgery, as witness his able treatise on Syphilis, the second edition of which is just out. For many years he was associated with Mr. Allingham, sr., on the staff of St. Mark's Hospital, having been appointed to that institution at the same date.

In conjunction with his colleague, Mr. Swinford Edwards, he is the joint author of Diseases of the Rectum and Anus, second edition, which we reviewed in a former number. Moreover, he is a contributor on Diseases of the Rectum to the Year-book of Treatment. Thus, in spite of his large private practice, he finds time for much literary work. Mr. Cooper, whose genial presence is often seen at Court and in society, is, moreover, a keen sportsman, be it among the grouse and stags of Arran or the partridges of Suffolk.

With Our Exchanges.

DISEASES OF THE RECTUM.

Mathews, Jos. M., Louisville: Etiology of Fistula in Ano. (*The Atlantic Medical Weekly.*)

Fistula in Ano is one of the most important of all surgical affections. The description given of it and the methods of treatment are so meager and obscure that one can scarcely form a correct idea of the magnitude of the subject by reading such.

If we are to take the text-books as guides, we will be left completely in the dark, both in regard to the etiology and treatment of the disease. Da Costa says that fistula in ano is an unhealed abscess.

Now in truth all fistulæ begin as an abscess, but when once established are a very different condition from an abscess proper. It might be more properly stated that a fistula (or fistulæ) is the result of an abscess. An abscess is to be understood as a circumscribed inflammatory condition containing pus, when fistulæ mean a branching out and the formation of sinuses as the result of the original condition. If a fistula was an unhealed abscess nothing would be required for its cure but drainage, either by free incision or perhaps its evacuation in some other manner. Certainly all that would be required would be a free incision and the trimming off of the edges of the cavity. Either method would accomplish but very little in curing a fistulous tract. The objection that is to be preferred to the definition of fistula in ano by the authors is to the classification given by them. For instance, it is nearly the universal custom to classify fistulæ as follows, viz., external, internal, and complete. This will do very well as concerns the direction that a fistula takes. For instance, an external fistula is said to be one that has an external opening, but no corresponding internal opening. An internal fistula is defined as being one with an internal opening with no external outlet. A complete one means where both an internal and external opening are found. Now in reality this classification has very little to do with either the etiology or treatment of

fistulæ. According to this classification there are many cases of external fistula without an internal opening, and *vice versa* many internal ones that have no external opening. And, too, a fistula may be complete and yet in its ramifications be both external and internal. To get more correctly at the true etiology of the disease, it would be much better to classify fistulæ as *progressive* and *non-progressive*. And, to go more minutely into the subject, it would be well to consider whether the disease originated from a so-called cold (or strumous) abscess or from an acute one. Every physician has observed a certain number of cases of fistula in ano that had existed prior to his seeing it a number of years. He has observed other cases that within the space of a few weeks had made such ravages by burrowing, destruction of tissue, etc., that it called for an immediate operation.

Now what was the difference in the two? In the first named an abscess had occurred in a healthy subject, perhaps the result of traumatism; the pus had been evacuated, the abscess had disappeared in consequence, the single channel or sinus had resulted, which had become lined by the so-called pyogenic (?) membrane; all inflammatory conditions had subsided, and the patient only discovers an occasional weeping of the sinus at intervals.

The other condition is quite different. An abscess formed, likely in the ischio-rectal fossa, the pus is evacuated either by incision or its own accord, but it is noticed that an infiltration of tissue takes place, additional inflammatory deposits exist, new abscesses form, and the disease progresses. Now in the first named condition the surgeon can very well say to his patient that he can wait for the development of symptoms. Likely nothing will occur, perhaps for months or years, in this case except the occasional weeping of the sinus. No fresh channels or sinuses form, no additional abscesses, or destruction from any cause. In the second condition named it would be contrary to all reason for the physician to say that the patient could delay one week, or one day, in having an operation done.

I claim, therefore, that this is a much better division of fistula in ano than is usually given by the authors. It makes very little difference with the operator whether a fistula should be called external, internal, or complete. In operating he will

determine this question for himself. It is of much greater moment for him to decide *when* to operate, and this can only be decided by considering whether the fistula is progressive or non-progressive.

Cachexia plays a most important part in the etiology of fistula, especially as concerns its treatment. Time was when authors advised and the profession believed that no patient should be operated upon who had the strumous habit. With our present knowledge of the origin of tuberculosis, every intelligent physician will concede that the sooner such a patient is operated upon the better. The old idea that fistula in ano acted as a derivative in these cases is long ago obsolete. To-day the most important word in surgery is drainage, and pus is the danger to be apprehended. In an acute abscess the destruction of tissue is carefully watched and guarded against by the surgeon, and yet he is always suspicious in these cases of infection. The latter, however, is carefully guarded against by nature. In the strong and vigorous constitution the inflammatory act is active and vigorous, and a deposit of lymph is thrown out, which acts as a barrier against the microbe. It is in the tuberculous subject that the reverse is true. Vitality is at such a low ebb that the lymph deposit is so very feeble that not only does a local destruction of tissue take place, followed perhaps by septic infection, or by the passage of the *streptococci*, but we have the special microbe, the *tubercle bacillus*, to deal with. It is a well-known fact that from a local point of infection, either in bone, muscle, or tissue, a general infection can take place and result in death; therefore is it that the surgeon to-day deems it necessary to resect a tuberculous joint or curette tuberculous tissue; therefore, if such tissue exists around the rectum, culminating in or producing an abscess or fistula in ano, it is absolutely necessary, looking to the prevention of a general tuberculosis or a localization in some other point of the tubercular bacilli. This view is so pronounced in my mind that in every case that presents, where it is possible to remove *all* the tissue, I practice this method, and invariably with success as far as the mitigation of the disease is concerned. When we remember the great distribution of lymph channels contiguous to the rectum, it can be easily understood why this procedure is necessary. Outside

of these pathological reasons of dealing with fistula in ano that has its origin from tuberculosis, it would be cruel not to operate upon a patient who is suffering great pain from the existence of the local affection. Even if the ravages have been so great that all of the tubercular tissue can not be removed, we give free drainage to the discharge and stop local distress. In my experience wounds upon the tuberculous patient heal much more kindly and with more rapidity, if carefully watched, than is supposed.

Bacon, Joseph B., Chicago: Fistula in Ano. (*Northwestern Medical Journal.*)

In the St. Mark's Hospital for Rectal Diseases, in London, the statistics show fistula to be the most frequent of all rectal diseases that apply for treatment, and that a large percentage of these applicants have been unsuccessfully operated upon by physicians before applying to the hospital. The same condition would probably be found in this country, had we a great center for collecting these patients where accurate statistics could be tabulated.

There were many good reasons, before the antiseptic treatment of wounds, why so many fistulas could not be successfully handled, but the main reasons are:

First, the general practitioner has failed to realize that all fistulas are the result of abscesses and that the fistulous tract is but the collapsed abscess wall, and that naturally there would be a tendency for the pus to have burrowed in most cases in various directions, leaving this collapsed abscess wall complicated by numerous channels radiating from the central canal.

Second, that until recently the student was not required to make careful dissections of the pelvic fascias, perineal and anal region, thus leaving him when in practice with a vague idea of the direction the pus from an abscess in these regions would likely take in accordance with the anatomical arrangements of the tissues. Repeated dissections only will give one an idea of the possibilities of the complications that may attend these abscesses, and also show how difficult the diagnosis and treatment may become.

Usually the abscesses will occur either subcutaneously, submucously or in the ischio-rectal fossæ, and still rarer, yet most

difficult when it occurs in the superior peri-rectal space. The various types of resulting fistulas will depend upon where and in how many places these abscesses have gained an outlet. While the division of some authors into first, blind internal, complete and incomplete; second, blind external, complete and incomplete; third, complete internal; fourth, complete external, will describe the greater number of fistulas one meets, there may be various complications with those that would make a more extensive classification possible.

The etiology of abscesses here may be the same as in other locations. Likewise, the symptoms do not differ from any other source of irritation around the anal region, except when there is an outlet for the pus secretion in such a location as to attract attention from its constant escape.

There are no secret remedies for the treatment of fistulæ. The same surgical principles apply here as well as elsewhere. Absolute cleanliness and disinfection of the tract with peroxide of hydrogen, listerine, bichloride solutions, and the various antiseptics, together with keeping the fistulous tract patulous, will cure a great many of these cases. Allingham's method of keeping the external opening dilated is an excellent one, and simply consists in inserting into the opening a bone collar button that has had a hole drilled through it lengthwise. Curetting or cauterizing the tract sufficiently to set up inflammatory conditions will hasten granulation and repair.

These palliative measures should only be used for a short time, when, if the tract has not healed, radical measures for laying open the tract must be taken, for long-continued suppuration always tends to amyloid degeneration of the viscera, with general constitutional disturbances.

In doing a radical operation for fistula there are some important points to be observed:

1. Never sever the sphincters at more than one place at the same operation, no matter what the complications may be, otherwise incontinence is sure to follow.

2. Unless all the channels are followed up and laid open the operation will fail of its purpose.

3. Fistula resulting from tubercular abscess must not be operated upon if there is sufficient tissue destruction of lung to

produce hectic fever, sweats, etc., unless the fistula is causing severe painful spasms of the sphincters, then it should be divided at any stage.

4. After laying the fistulous tract open the wound must be made to heal from the bottom, and as the cutaneous or mucous side of the wound is better nourished it will throw out a more healthy granulation that tends to bridge over and close the slower granular surface at the bottom, thus leaving a fistula remaining.

5. When the fistulous tract is not too complicated it should be dissected out entire and the wound brought together, beginning at the bottom with continuous catgut sutures, and approximating the surfaces in successive layers until the whole wound is closed.

All operations about the anus, although theoretically septic, should be done with the same care and dressed the same as for a laparotomy, then more of them will heal without formation of pus.

The general prejudice among the laity against having fistulæ cured has been taught them by ignorant physicians, and to disabuse their minds of this idea will take time and concerted action of the profession. It is a common thing to see patients in the hospitals whose viscera have undergone amyloid degeneration, and they have become hopelessly wrecked by a long-continued septic absorption from a fistulous tract that a minor operation would have relieved at its commencement.

JONES, THOMAS: TREATMENT OF CANCER OF THE RECTUM BY EXCISION. (*Med. Chronicle, Am. Medico-Surg. Bulletin.*)

The operations recommended for rectal cancer are divisible into two classes: (1) Those that aim at the relief of urgent symptoms, and (2) those that have for their object complete removal of the diseased mass. Among the former, colotomy, without doubt, offers the best prospects. It not only relieves the sense of weight and uneasiness in the part affected, and removes all chances of obstruction, but checks the progress of the disease and places the patient in a state of comparative comfort. Free scooping away of the diseased mass and linear proctotomy are methods of relief which have little to recommend them. Removal of the cancerous growth by the free use of a scoop or of the fingers may relieve the symptoms of obstruction, and should perhaps be adopted when other means are not available. And it

appears, from the cases that are on record, that when the diseased mass is thoroughly broken up and taken away the loss of blood has not by any means been conspicuous. Strange as it may sound, partial cicatrization has even taken place in such cases.

The radical cure of rectal cancer can only be effected by free excision from the perineum; and of late years this procedure has been revived with a fair prospect of success. If the operation is adopted indiscriminately in all cases it is certain to fall into disfavor. The merits of each case, as it presents itself, must be carefully weighed, and only those cases operated upon in which there is a reasonable prospect of removing the whole of the disease. Before a final decision is arrived at the rectum must be explored while the patient is under the influence of an anesthetic, and attention directed to the following points: The extent of the disease and the state of the rectum in regard to mobility in the pelvic space. We must also have regard to the general condition of the patient with respect to strength and nutrition; his age; as to whether there is any evidence of the disease affecting parts outside and adjacent to the rectum; also, whether there are any symptoms to show secondary deposits in the liver or elsewhere.

The immediate risks of the operation do not appear to be great; the deaths have been placed as high as sixteen per cent., but Czerny operated upon twenty-five cases with one death only as the direct consequence of the operation. As might be imagined, the cause of death in the large majority of cases has been pelvic cellulitis and peritonitis.

In most instances the patient recovers sufficiently to enjoy life, and even to resume active work, and it is possible that the disease may not show itself locally, but return in some internal part where its ravages are less dreadful to witness. Besides this, the moral effect of total removal of the disease can not be overestimated. The effect on the mind of the presence of a disease which it is impossible to remove is of the most depressing character; with its removal the patient may recover much of his wonted spirits and buoyancy.

With regard to the possibility of a complete cure, the statistics furnished by Cripps are very encouraging. In nine out of twenty-three cases the disease recurred after periods varying from four months to two years, but six remained well after intervals

which varied from two to four years. In this, as in all operations for the removal of cancer, the need for an early diagnosis and prompt and efficient treatment must be constantly kept in view.

FULTON, ANDREW L.: STRICTURE OF THE RECTUM, MALIGNANT AND NON-MALIGNANT. (*Kansas City Medical Record.*)

The differential diagnosis between cancer and stricture, or indurated ulceration, is sometimes quite difficult when the stricture is high up in the rectum, but comparatively easy when advanced and in close proximity to the anus.

The microscope is much used in diagnosing doubtful cases, but has not proved very satisfactory to me. In my early practice I was twice deceived by the microscopists, who diagnosed malignancy when subsequent results showed that the disease was nothing worse than indurated ulceration. While I am not disposed to condemn the value of the microscope, I feel now that in doubtful cases I would prefer trusting the digital examination, especially when the growth is easily reached with the finger. The cancerous condition of the rectum is simply a filling up with an irregular mass, without any well-defined feeling of constriction, accompanied by a crumbling or breaking-down process; while the stricture due to syphilis, or like causes, is a building-up with a hardened constriction.

The principal causes of rectal stricture are syphilis and direct injuries resulting in inflammation of the cellular tissue around the rectum. Of these two chief causes for stricture of the gut syphilis is by far the more frequent.

Observation of the treatment by others and my experience with a large number of cases of my own, since I read an article by Dr. Joseph Mathews, of Louisville, presented at the Washington International Medical Congress a few years ago, lead me to the conclusion that the ordinary non-malignant stricture of the rectum should be treated either by forcible dilatation (divulsion) or by rectotomy.

I have treated, in the last two years, fifteen cases that I have a history of. One a malignant growth, the patient died; another in doubt, which I lost sight of; and thirteen benign. The cancerous case was treated by extirpation, but it soon recurred. Of the thirteen mentioned, three gave the history of injury during

parturition. Two of them were cured by divulsion; the third one was divulsed first, but subsequently returned, and fistulous openings were formed in the recto-vaginal wall, necessitating rectotomy and repair of the septum for its cure.

In doing a rectotomy, as practiced by Dr. Mathews, I deem it an outrage to follow the practice described in text-books on surgery. A complete division, incising down to the sacrum and coccyx, including the sphincters, either from without or within, as spoken of, is not difficult to accomplish; but the regaining of the sphincter control will sometimes fail of success. The much safer, better, and quite as effective procedure is to first dilate and paralyze the sphincter, if not already paralyzed; then introduce the finger through the stricture after having washed out the rectum thoroughly with an antiseptic solution. This done, with the finger of the left hand well in the stricture, an ordinary long narrow-bladed bistoury is introduced alongside the finger till the upper part of the stricture is passed, then turning the edge of the knife directly backward, an incision is made as deep and as low down as is necessary to divide every fiber of the stricture; a small portion of the internal sphincter may of necessity be divided also. In no case in which I have done this kind of a linear rectotomy have I found it necessary to completely divide the sphincters, although I have divided a small portion of the internal one, sufficient to give a sense of perfect division of all offending tissue.

Porter, Ira W., Florida: Prolapse of Rectum in Child One Year Old. (*Southern Medical Record.*)

Recently I was called in to attend a case of prolapse of the rectum. The patient was a baby girl (Cuban) one month old. The prolapse was of ten days' standing.

The father could not speak English very well and the mother not at all. Through an interpreter I learned that the child had been having hemorrhages from the bowels for two days, during which the rectum prolapsed. The hemorrhages continued for a few days longer, but had been stopped by medicine obtained through a druggist.

On examination I found the rectum protruding about one inch and a half or two inches. The protrusion was dark red

and angry looking. There was the characteristic depression at the apex which proved to be the lumen of the gut. The base of the protrusion was constricted by a dark ring of mucous membrane corresponding in position to the anus. The protrusion was very sensitive to touch. Placing my finger on it excited peristaltic movements, which caused the bowel to protrude farther.

I tried reduction by taxis and compression, but without avail. The child, in my opinion, was too young to anesthetize with chloroform or ether, so my only recourse was to local applications. I debated in my mind whether it were safe to anesthetize the gut with cocaine and then reduce by taxis. While I was debating, I prescribed an ointment of oil of hamamelis one drachm, tannic acid five grains, vaseline one ounce, and directed that some of the ointment be spread on a piece of absorbent cotton and applied to the gut by a compress. This to be done twice a day.

The next day the protrusion had receded nearly two-thirds of its length. I ordered the application to be continued, and the third day thereafter I found my patient well. During the treatment there was no hemorrhage, and the bowels acted normally. There has been no return of the prolapse.

Baughman, J. N., Flat Lick, Ky.: Fistula in Ano. (*The American Practitioner and News.*)

The treatment of fistula which if properly carried out will produce the most good is undoubtedly the preventive, for I think there never was a case of fistula in ano that was not preceded by an abscess of some kind, and if we would be careful to open up the abscess as soon as pus is discovered and give it free vent, and then keep it packed with iodoform gauze so it would heal from the bottom, we would very rarely have it result in fistula. But while we are giving the local parts appropriate treatment we should not neglect the constitutional treatment that is so often necessary in those cases, for while we sometimes find rectal abscess in the strong and robust we more often find it in the consumptive and scrofulous diathesis, and so long as the general health is impaired we can not expect the local lesion to be furnished with healthy granulations which are so essential to a successful issue. It is also in this class of cases we can bring into active help for our patients our psychological knowledge,

for all rectal and urinary troubles play sad havoc in their debilitating effect upon the mind.

I would here state that I would not hesitate to operate on a fistula in a consumptive for fear of aggravating the lung trouble, but only from the fear that in some stages the system is so run down and the blood in such a poor state as to make it impossible to obtain healthy granulations in the cut surface.

There is a great objection with most persons to the use of iodoform on account of its odor, and from this fact I would be inclined to use as a dressing for the granulating surface Marchand's peroxide of hydrogen, which is the most cleanly and at the same time the most perfect disinfectant we have. Almost perfect cleanliness, and I may add sweetness (surgically considered), even in a rectal abscess may be obtained by the use of this remedy, and it is perfectly harmless, and if kept in a cool place and well corked and wrapped can be kept pure for many months.

Bloomfield, J., Napoleon, Ohio: A Unique Malformation of the Urethra Associated with Piles. (*Columbus Medical Journal.*)

Patient was thirty-five years of age. Examination found a complete absence of the penis, except a small glans about as large as the end of the little finger, and not more than half an inch in length. There was entire absence of meatus or urethral opening. Surrounding the glans was a narrow fold of skin, less than one eighth of an inch in width, resembling somewhat a rudimentary prepuce. On rubbing or pinching the glans there seemed to be an entire absence of that peculiar sensibility found in the normal organ. Just beneath and under the arch of the pubes could be felt a small oval body, about as large as an almond. Gently rubbing this body excited the sexual orgasm, the semen passing into the rectum. The testicles were large and perfectly formed; the spermatic cords normal. Patient had been passing urine very frequently for three or four months, with great amount of pain and tenesmus.

Examination of the rectum showed two pile tumors on the anterior wall. About an inch and a half above the anus, just above the pile tumors, the urethra opened into the rectum. It took a strong effort to empty his bladder, the piles protruding

on account of the straining; this blocked up the anus, causing spasm of the sphincter ani, dragging down the orifice of the urethra, still further interfering with the act of urination. As the tumors were so near the orifice of the urethra, and as the rectum was constantly drenched with urine, the operation of removing them was deemed inadvisable. This opinion was concurred in by Dr. Mathews, who saw the patient some time later, but he advised a thorough divulsion of the sphincter, which was done. Considerable relief resulted from this operation. The patient died from uremia.

Taylor, John W., Birmingham, Eng.: Abscess of Labium Due to Rectal Suppuration or Fistula. (*Birmingham Medical Review.*)

Miss W., aged thirty-four, for some weeks had been suffering from abscess of considerable size in the left labium. This was discharging from a small opening near the fourchette. Examining under anesthesia, pus was found to come from a small opening just in front of the hymen. A probe introduced passed through this opening into a large abscess cavity in substance of the left labium majus. No trace of a sinus leading to rectum could be found. Abscess was opened and cleansed, but pus continued to discharge from the same situation as before. The opening of a sinus was found in the anterior wall of the rectum, just above the sphincter. The course of the disease appears to have been as follows: A suppurative peri-proctitis occurred high up, forming an abscess cavity. This burrowed as far as the perineum and was then deflected forward to the left labium, where the bulk of the pus collected. Later a secondary opening formed into the rectum just above the sphincter. Patient made a good recovery after an operation.

Ferguson, Prof. A. H.: New Method of Treating Recto-Vaginal Fistula. (*North American Practitioner.*)

The author has reported the successful treatment of recto-vaginal fistula by a new and ingenious method. Beginning in the vagina he dissects the fistulous tract loose from the vaginal mucous membrane and the recto-vaginal septum, using great care not to wound the rectal mucous membrane, thus leaving the

fistulous tract freed except at the rectal end where the mucous membrane is firmly adherent. He now passes a pair of artery forceps or a blunt hook through the fistula from the rectum and inserts the fistulous tract into the rectum, when a ligature is applied at its base, the same as if it was a polypus, thus effectually shutting off all infection of the wound from the rectum. From the vaginal surface the recto-vaginal septum is united with buried chromic catgut sutures. The vaginal mucous membrahe is next dissected free from the septum sufficiently to enable the operator to approximate its free border by a snare ligature and thus close the deeper wound from any possible infection from the vaginal secretions. The cases so far operated upon by this method have made a successful recovery after a primary union of the wound.

GASTRO-INTESTINAL DISEASE.

Frank, Louis, Louisville: A Unique Case of Intestinal Fistula following Celiotomy. (*The Medical News.*)

A. T., twenty-eight years of age, gave a history of severe dysmenorrhea for past five years. Has had only one child, puerperal fever following. Since then patient has been confined to her bed before and after menstrual period. Exquisite tenderness was revealed on both sides, and the diagnosis of double pyosalpinx was made.

Patient operated on June 23, 1894, and dense adhesions found on both sides, and both tubes were enucleated with difficulty. A drainage-tube was used, the abdomen closed and dressed in the usual manner. Tube was removed on third day.

The patient did unusually well, without any elevation of temperature, the bowels moving in due time, until the sixth day, at which time the patient developed some tenderness along the point of the incision; the dressings were removed, but nothing unusual found. At the end of a couple of days more she was still complaining, and the dressings were again removed and the stitches taken out. Provisional sutures had been put in at the point of drainage, and when these were removed there was a gush of slightly sanguineous fluid, very thin in consistency, with, however, no indication of pus. This left a fistulous tract. The fistula was treated with hydrogen dioxid and packing, and closed in a couple of weeks. The woman had also a great deal of vesical tenesmus, followed by a violent cystitis, which kept her in bed a week longer. The temperature in the mean time had subsided to normal, and there was absolutely no indication of there being any thing amiss. About the sixth week she became obstinately constipated, resisting salines, calomel, and enemata of water and of water and glycerine, etc. This constipation continued for five days. The woman was then again put upon two-drachm doses of Rochelle salts, repeated every hour, and these were continued until she had taken about four ounces. All at once there occurred one morning a gush of fluid, mixed with a little fecal matter, from what had previously been the sinus. A short while afterward the bowels moved, the action being copious and repeated a number of times.

Examination then showed that a fecal fistula had established itself at the point of drainage. This fistula was treated by local applications, tonics were ordered, and the bowels were kept open. In about ten days the fistula had closed absolutely, there never having been, however, any escape of fecal matter since the first discharge mentioned, but the patient had continued at times to pass a little gas through the opening.

The woman was now sent back home, directions being given her physician to watch her from time to time. Later it was learned by letter that the fistula had again reopened, and that gas was occasionally passing, and also that she passed several lumbricoides through the fistulous tract. The fistula remaining open, she was again sent to me for operation, but my clinic not being in session she was referred by me to the clinic at the Louisville Medical College, where she came under the care of Dr. A. M. Cartledge, who dissected out the fistulous tract, and closed the opening in the bowel in a most beautiful manner, the patient making a perfect recovery.

The patient says that she has passed in all seven lumbricoids through the fistula; that upon two occasions others have come to the external opening, partly protruding, so that she has been able to see them, and then go back. She has had absolutely no pain except just previous to passing a lumbricoid, when she would have a great deal of pain, and she says she always knew when one was coming.

The operation revealed, as had been suspected, that the fistulous tract was in the track of the drainage, and that at the bottom there was the ligature that had been applied to the broad ligament, and had no doubt become infected through the drainage-tube. At this point the knuckle of gut was adherent, forming almost a complete loop, the fistula itself being drawn up by the intestines.

Lindmore, C., Arnold, F., Atlanta, Ga.: The Parenchymatous Rupture Treatment. (*The Atlanta Medical and Surgical Journal.*)

The fate which this treatment has met shows again that a practice which is based upon a crooked theory does not secure good results. If the leading thought of a technical procedure is

not vested in anatomy and physiology, it can not become a working theory; it has no foundation in reality, and if it be ever a success it is a mere casualty, depending on fortuitous circumstances, the nature of which is unknown, and can methodically therefore not be taken advantage of.

The first case which came under our observation was an exceedingly captivating one. It was an aged individual with a severe scrotal hernia of long standing. As a rule there was an easy reduction. But repeatedly strangulation had threatened, and when we saw the case the trouble had wrought secondary symptoms which rendered a remedial interference peremptory.

The injections were made at random. Since there was no fixed theory, the operator was at sea about whether the medicine would work better by being thrown in the midst of the ring or into the pillars of the same. But the lack of theory was no impediment of success. After one and a half or two dozen injections the breach was closed up. Our invalid could lay off his truss, stood and walked more erect, and was complimented on having added a half-score years to his term of life, if no more.

The cure remained by no means unique. But then cases which were not a tenth part so bad proved rebellious, and up to date it remains to the author a sort of mystery why the most desperate of the cases got well so soon, while others, with nearly the same, or a more careful treatment even, were left out and had to be abandoned as incurable.

The remedy used was the following:

℞ Tinct. arnic. hamam ..... ℥ ss.;
Sulph. zinc ..... gr. xxxij;
Aquæ destill ..... ℥ j.
M. Filter. Running off clear.
Add alcohol ..... ℥ ss.

Inject from eight to twenty-five drops; but the author advises that only ten or twelve drops be used. He also advises the use of alcohol alone, injecting not more than ten to twelve minims at most, some pain and smarting resulting, but soon relieved.

A danger against which those who want to try the treatment must be warned is to throw the medicine, instead of into the outer or the inner ring, according to whether the case is direct or indirect, between the two layers of the superficial fascia. Prob-

ably in consequence of the profusion of lymphatics which throng in the latter, the medicine is liable to cause lymphadenitis, which tends to discredit the treatment. The strength of the alcohol was about 70°.

MURPHY, J. B., CHICAGO: THE USE OF THE MURPHY BUTTON. (*Chicago Clinical Review.*)

1. The cicatrix produced with the button does not contract.

2. Size No. 1 ($\frac{3}{4}$ inch or .02 m.) or No. 2 ($1\frac{3}{16}$ inch or .022 m.) should be used for cholecystenterostomy. I prefer No. 2.

3. End-to-end, side-to-side, and end-to-side of the small intestines should be made with the button No. 3. ($1\frac{5}{16}$ inch or .025 m. in diameter).

4. End-to-end and side-to-side of large intestine should be made with button No. 4 (1 inch or .026 m. in diameter).

5. A special size ($1\frac{1}{4}$ inch or .029 m. in diameter), with a long male cylinder, may be used in some cases of resection of the rectum with advantage, but it should not be used unless it fits loosely.

6. In intestinal obstruction resection with end-to-end union gives better results than lateral approximation, and should always be performed where practicable. The same operation should always be done in gangrenous hernia. In fecal fistula the bowel should be resected and united end-to-end.

7. The patients should receive liquid nourishment as soon as the effect of the anesthetic passes off. The bowels should be made to move as soon as possible after the operation, and frequent evacuations kept up.

8. If the button does not pass in three or four weeks, the rectum should be examined, as it may rest just inside the sphincter.

9. There has been one case reported of occlusion of the button by fecal impaction in the cylinder. This can be easily avoided by a mild cathartic immediately after operation.

10. When returned to the abdomen the intestines should be placed in parallel lines, especially at seat of approximation, to prevent sharp curves and obstructions. This occurred once with the button; many are reported following suture.

11. There is no danger from obstruction from the button, as not a single case has been reported. This proves that the deduc-

tions made by Chaput, of Paris, from experiments on the cadaver are erroneous.

12. There is no danger of extension of the pressure atrophy beyond the line of pressure.

13. Primary adhesion may be hastened in malignant cases by abrading the peritoneum with a needle. It is unnecessary in non-malignant cases.

14. A supporting suture is never necessary to secure union, and should only be used to relieve tension when the viscera approximated are forced out of position.

15. The mucous membrane should be pushed down in the cup of the button before closing it; if redundant, it should be trimmed off with the scissors. *It should never be allowed to protrude between the edges of the button when the button is closed.*

16. While the button is easily inserted the pathologic condition requiring the operation may demand the greatest surgical skill to secure a favorable result.

17. The following points regarding the construction of the button should be noted before using it:

(1) The spring catches should hold firmly in all positions, and should be made of a metal that will not be corroded by acids.

(2) The elastic pressure cup should be on the male half of the button (never on the female).

(3) The edges of the pressure surfaces should be very smooth and hemispherical in shape.

(4) The spring under the pressure cup should not be too strong.

(5) There have been defective buttons on the market. The following firms are at present manufacturing perfect buttons: J. J. Ryan & Co., Chicago; Truax, Greene & Co., Chicago; Geo. Tiemann & Co., New York; W. F. Ford & Co., New York; Down Bros., London, Eng.; Sharp & Smith, Chicago; Frank, Kratzmueller & Co., Chicago.

18. If the button appears at the opening of the fistula after lateral approximation, do not try to force it through the opening, it is unsurgical; open the abdomen and (*a*) press it back to the anastomotic opening and through it on down the intestine and it will pass, or (*b*) make a longitudinal incision in the bowel and take it out.

GRUTZNER, P.: PHYSIOLOGY OF INTESTINAL PERISTALSIS. (*Deutsche Med. Woch.; American Medical and Surgical Bulletin.*)

G. has demonstrated that although as a rule fluids introduced into the rectum are at once absorbed, in some cases, however, he observed that colored fluids introduced into the rectum of animals could be detected some hours later in other portions of the alimentary canal, and especially in the stomach. This led him to a series of experiments, and, employing small solid particles, he found that they would be transported to the stomach after introduction into the rectum. He observed that if a small quantity of a mixture composed of equal parts of powdered animal charcoal and 0.6 per cent. salt solution were injected into the rectum of an animal, which had been allowed to fast for twenty-four hours before the introduction of the mixture, after the lapse of about four to six hours, the animal being killed, small quantities of the charcoal were present in various parts of the intestine, but particularly in the stomach. In carrying out a similar series of experiments upon the human subject, using starch and table salt for these purposes, G. found that after some hours the starch could be detected present in the contents of the stomach.

The cause of this antiperistaltic movement G. ascribes to the chemical consistency of the fluid with which the particles are mixed, this upward movement invariably taking place when the substances were mixed with a weak solution of table salt, but never when suspended in plain water or other solutions. The table salt seems to act directly upon the mucous membrane of the rectum, and occasions this "upward movement," or antiperistalsis. The upward movements take place in spite of the large masses of fecal matter driven downward, but are confined, however, only to the peripheral portions of the intestinal lumen.

PACKARD, JOHN H., PHILADELPHIA: THREE CASES OF LEFT INGUINAL COLOTOMY. (*Medical and Surgical Reporter.*)

Case 1. James Brewster, a mulatto, aged fifty-five years, but looking much older, was admitted into my ward at the Pennsylvania Hospital, November 26, 1892, on account of epithelial cancer of the rectum. His condition was most deplorable; there was a mass of disease stiffening the wall of the bowel and discharging from its ulcerated surface a very offensive pus, which,

mixed with fecal matter, flowed away constantly through the wide-open anal orifice. Hence he not only suffered agonizing pain, but the intolerable fetor made him loathsome to himself and to all about him.

He had, moreover, a left inguinal hernia, which he ascribed to the kick of a horse in January, 1891. This did not in any way interfere with the operation, which was done four days after his admission. The opening into the bowel was not made until December 4th, or four days later.

Immediately after the operation his temperature fell to 97.6°, but he soon rallied and did well. The artificial anus gave no trouble, but was cleansed once daily. By means of washing out with solution of potassium permanganate or other detergents, the rectum was rendered inoffensive. A portion of the diseased mass was curetted away about four weeks after the colotomy, but no more radical procedure seemed to be justified.

The patient lived in comfort until April 18th, nearly five months, and then died painlessly from exhaustion.

At the autopsy it was found that the morbid growth extended five inches above the anus and had involved the posterior wall of the bladder; there were abundant deposits in the pelvic and mesenteric glands.

A somewhat noticeable fact was that the serous covering of the gut was adherent to the parietal peritoneum for a long distance above the point of operation.

Case 2. Ellen Black, aged fifty-two years, was admitted under my care in the Pennsylvania Hospital, October 24, 1893, suffering from extensive cancerous disease of the uterus, involving the rectum; she had not had a natural stool for a year. Her general health was not greatly impaired, but she had great distress by reason of the rectal obstruction.

The next day I exposed and secured the sigmoid flexure, and twenty-four hours afterward opened the bowel. Just after the operation her temperature fell to 96.2°, but reaction took place quickly. Regular movements were soon had through the artificial anus, and on the seventeenth day she was discharged at her own request, to return to her home in Sullivan County, Pa.

Case 3. Mrs. M., aged about fifty, living in one of the cities in the interior of this State, was seen by me in April, 1893, on

account of almost total obstruction of the rectum by the pressure of a tumor of the womb, which filled up the entire pelvic cavity. To attack this in its then condition seemed to me, as well as to her physicians, unwarrantable; and as her suffering arose mainly from the rectal obstruction, I proposed opening the bowel in the left groin. To this she agreed, and I performed the operation at her residence. Complete relief was afforded, and after some experiments in the devising of a suitable contrivance for keeping control of the contents of the bowel, this lady was enabled to resume her active life, going into society freely, and attending to all her affairs without hindrance.

Should this tumor, probably a fibroid, develop so as to rise out of the pelvis, the question of hysterectomy might be entertained; and if this were successfully accomplished the closure of the artificial anus might, perhaps, be undertaken.

Allison, Charles C., Omaha: The Mechanical Treatment of Hernia.

A. The Hood truss encircles the body and makes pressure at four points, two posteriorly, over the lumbo-sacral articulation, and two anteriorly, over the inguinal ring and canal. The transversely slotted pads are attached to the slotted plate; thereby a wide range of motion is gained.

B. The Knight, named for the founder of the Ruptured and Crippled Hospital, is of the cross-body variety, consisting in a steel band, to the end of which a malleable shank, two inches long, gives attachment to the round, moderately convex pad. This appliance is inexpensive, and with some mechanical ingenuity is easily modified; thus admitting of application in many phases of rupture.

C. The Seeley and the opposite-side celluloid of Penfield resembles the Knight without the malleable shank, and they are therefore limited in their range of usefulness.

D. The Milliken, or combined Hood and Knight, is very efficient in cases with corpulent abdomens and large rings. The pelvic band completely encircles the pelvis and presents a malleable shank, slightly longer than the Knight.

E. The last candidate for favor I shall mention is the Honest John, which presents a bronze bar running parallel to the pubic

bone, to which is attached a sharply convex pad with the large extremity pointing upward and outward. Latterly the truss defines a sharp curve upward and outward, the convex surface resting below the anterior superior spine. This truss fits the pelvis snugly, and can be so molded as to exert marked pressure; it is light, moreover, and when well applied can be comfortably worn. My objections to the truss are the sharp convexity of the pad and its applicability in direct or long-standing oblique cases in which the pressure must be made over the external ring and near the pubic arch. In recent cases an oval pad will suffice. I would therefore discourage the general use of the Honest John.

To summarize, therefore:

1. A recent case, or *bubonocele*, is best retained by the Knight, the Hood, or the opposite-side celluloid of Penfield.

2. The *oschiocele*, in which the integrity of the canal has been preserved, will be retained by the Hood, the Marvin, the Knight, or the Honest John.

3. Old cases, with obliterated canals and relaxed pillars, are amenable to the Milliken, the Marvin, and the Knight.

Irreducible herniæ in the majority of cases suggest operative measures, but when this is contra-indicated a simple spica, with a soft pad, reapplied every twenty-four to forty-eight hours, often accomplishes reduction.

The patient should be told the nature of his trouble, instructed in the application of his truss, cautioned against those influences which act against perfect retention, advised to keep under observation of the medical attendant, and assurance may be felt that much danger will be averted, most cases improved, and many enabled to discard their support.

MARVIN, J. B., LOUISVILLE: SOME REMARKS CONCERNING SO-CALLED DYSPEPSIA. (*American Practitioner and News.*)

In regard to the management of these cases, I have narrowed it down to a few simple things. In a majority of the cases I see of gastric troubles in men or women, I find the best results are obtained from the mercurials. Those cases of biliousness, so-called, which are nearly always dependent upon indigestion, are benefited more markedly in my experience by either small doses of calo-

mel, or calomel and ipecac, or the old-fashioned blue pill. How mercury acts, whether by exciting the flow of bile, whether by stimulating the mucous or glandular structures, whether by toning up, as it were, and increasing the motor powers of the stomach, in this way hastening or aiding digestion, or whether acting as an antiseptic and purgative, I do not know. It is as old as the history of medicine, and in my experience has given better results than any other one agent. In some cases I have given five grains blue mass on alternate nights, keeping it up for quite a while; in some cases only one grain was given. In some cases I have found it necessary to give a little colocynth. I have employed this treatment extensively and have never had occasion to regret it. I have had one or two cases that I have had opportunity to watch for a period of ten years treated by the use of calomel; they would keep a record of the amount of calomel taken from day to day and week to week.

On general principles you might say that iron was indicated in these cases. I think the class in which iron is indicated from the start is rather small. Iron has proven rather an inefficient and unsatisfactory remedy with me. I generally give the mercurials first, relieving constipation and stimulating glandular secretion.

Now there is another class of cases in which you would not use the mercurials; cases where you want some mild cathartic action, cases in which salines in hot water before meals wash out the stomach and empty the bowel. In such cases I have found that Rubinat water acts more satisfactorily than any of the natural saline waters, is less griping and more pleasant. The next and more important in a certain proportion of cases is rest. Given a woman that is nervous and hysterical, suffering from a great many of the symptoms already detailed, I believe the best results can be obtained by putting her to bed, getting her to sleep twenty-four or even thirty hours. Great benefit is sometimes obtained in this way, by giving the patient absolute rest. I know most authorities recommend exercise rather than rest; of course a certain amount of exercise is advisable, but these patients also need rest and sleep, and plenty of it. I am satisfied that another important thing in the treatment of these cases is isolation. I have in mind now the case of a lady that had emesis a number of

times a day, which had lasted for a long time despite any means of treatment that had been adopted. Under a few weeks' management, such as I have described, she entirely recovered and is perfectly healthy to-day. Another case of a similar character occurred in the person of a little boy. I gave very small doses of bichromate of potassium, $\frac{1}{10}$ or $\frac{1}{12}$ of a grain in solution pretty well diluted, taken on an empty stomach, repeating this dose two or three times daily. In some cases this drug seems to have a very marked effect, and it is certainly worth a trial. My experience with this old remedy is limited. It has been in use extensively by our homeopathic friends.

HAYEM: LESIONS OF THE STOMACH. (*Sem. Méd.; British Medical Journal.*)

Discussing this subject, the writer says that, in his opinion, acute parenchymatous gastritis is a process beginning in the glandular elements, and in the pure form is independent of any leucocytic infiltration. The portion of the stomach first affected seems to be the cardiac, and thence the lesion spreads, with the result that the pyloric portion becomes completely changed, losing its distinctive character, and finally being indistinguishable from the cardiac end. He maintains that there are no special cells for the secretion of hydrochloric acid, and in support of this he points out that in the stomach of the newborn child the parietal cells are well developed, although gastric digestion is carried on without any hydrochloric acid being present. Again, he has found no increase of parietal cells in the adult stomach in cases of hypersecretion of this acid, but that in these cases the increase in amount of hydrochloric acid seemed to correspond with the transformation of pyloric into peptic glands, or, in other words, with the disappearance of the alkaline pyloric secretion. The debated question of the presence or absence of hydrochloric acid in cancer of the stomach has, according to the author, lost all interest. The state of digestion, he says, depends in cancer, as in any other gastric condition, on the condition of the gastric mucous membrane. Cancer is developed most frequently in hypopeptic or apeptic cases, and it is in such that free hydrochloric acid is absent, while histological examination of the stomach shows "atrophic gastritis." On the other hand, a hyperpeptic con-

dition may exceptionally be found in persons suffering from gastric cancer. In such cases one would expect to find a different anatomical condition, and in such a case he quotes Lion as having found well-marked parenchymatous gastritis. Gastric ulcer, on the other hand, is most frequent in hyperpeptic cases, and the dominant lesion is a form of gastritis more or less parenchymatous in nature. The pathogenesis of gastric ulcer, however, is a very much more variable question than that of malignant disease.

CLARKE, N. L., MERIDIAN, MISS.: A NEW COLON TUBE. (*Mississippi Medical Monthly.*)

The accompanying cut shows a recurrent colon tube, made of soft rubber, which I have found admirably adapted to the irriga-

tion and medication of the colon in colitis, especially in children. I have often felt the need of a suitable tube for making such applications, and a trial of this one proves it to be all I have desired. With the soft rubber catheter or rectal tube used for intestinal irrigation the trouble is the too rapid filling and overdistension of the bowel, producing pain and contraction, with the expulsion of the fluid before a thorough application of the medicament is made. With this tube, with the attachment of a fountain syringe, the inward flow can be modified to allow of any degree of pressure desired, but should be made to slightly exceed the outward current, the object being a thorough flushing or bathing of the intestinal mucous membrane without too great distension.

This tube is made at my request by the A. S. Aloe Company, the well-known and popular instrument dealers of St. Louis.

SEARS, GEORGE G., BOSTON: A CASE OF CONGENITAL DIAPHRAGMATIC HERNIA. (*Boston Medical and Surgical Journal.*)

The child, an apparently perfectly formed seventeen-pound boy, was born in December, 1885, after an easy labor, the second stage lasting but an hour. Immediately after birth it gave two or three short, sharp cries, and then, though it seemed to make

every effort, it was unable to produce a sound. Respirations became gradually shorter and quicker, cyanosis deepened, and death resulted an hour later. The only abnormality found was the position of the apex-beat in the right axillary line. Only a most superficial physical examination, however, was made, as all our efforts were concentrated in encouraging his attempts to breathe. The autopsy was made by Dr. W. F. Whitney, who found the following condition:

"The greater part of the small intestine, with the stomach and spleen, were found in the thoracic cavity, into which they had passed through a hole occupying the greater part of the left side of the diaphragm. The left lung was reduced to a single lobe (the upper), and pressed upward and forward. The right lung was normal, but pressed upward by the heart, which was in its pericardium in the lower part of the right pleural cavity. The lungs were compressed, but could be distended. Nothing else abnormal noticed."

The size and contents of these herniæ have varied from a small bit of omentum to half the contents of the abdomen. According to Lacher the only organs which have never been present are the urinary bladder, the rectum, and the genitals, but diagnosis is not possible clinically, unless the stomach or bowels have invaded the thoracic cavity. Typical cases — where the abdomen is retracted; the affected side of the chest expanded, tympanitic, and with little or no respiratory movement; the intercostal spaces bulging; the apex-beat and area of cardiac dullness absent or displaced; and on auscultation the possible presence of metallic tinkling or other musical sounds — would seem easy of diagnosis, confusion with a pyo-pneumothorax being the most likely source of error; but practically only about half a dozen cases have been correctly made out, and in most of these the diagnosis was considered only probable. The most reliable and constant sign is cardiac displacement, especially in left-sided herniæ, which are six times more frequent than right, since the usual causes can always be readily eliminated. Congenital transposition of the heart might lead to mistake, but the more frequent error seems to have been made in taking the displacement due to herniæ for a simple dextro-cardia. The amount of dislocation may vary at different examinations, according to the amount

of distension of the thoracic portion of the stomach or bowels; and in doubtful cases Abel suggests the careful introduction of water into the stomach by means of a tube, and noting the position of the heart as water is added or withdrawn. Failure to arrive at a diagnosis has not always resulted so much from a lack of distinctive signs and symptoms as from oversight on the part of the physician; yet when over three hundred reported instances can be collected, it is not so rare that the possibility of its occurrence should be forgotten in making a differential diagnosis between conditions which it may simulate.

Marcy, Henry O., Boston: Surgical Treatment of Inguinal Hernia. (*Medical News.*)

Hernia in Children. Until a moderately late period nearly all this class of little sufferers have been relegated to the instrument-makers. However, every surgeon is painfully familiar with the fact that it is exceptionally difficult to secure the proper wearing of a retention apparatus, and that, at the best, the cure of hernia by these means is tedious, painful, and unsatisfactory. The earlier attempts at cure of hernia by dissection and suturing were in large measure unsatisfactory, because of the use of the interrupted suture, which had to be removed, and the extreme difficulty of keeping the wound aseptic on account of the application of the drainage-tube. It is painful to recall the punishment of the little sufferers because of the multiple aseptic dressings, sometimes held in place even by plaster bandages. With all the care possible, the great majority of the wounds become infected, dangerous, and far from satisfactory in results.

The closure of the parts, as already described, with the seal of collodion renders further infection impossible, and primary union supervenes without pain or edema, resulting almost invariably in permanent cure. It is pitiable in the extreme to send a boy, rich or poor, into the race of life suffering from hernia and handicapped with the necessary wearing of a truss.

Hernia in Adults. It may be considered an open question if active, vigorous men who are sufferers from small herniæ, easily retained by a truss, should be subjected to a surgical operation. The expense incident thereto and the loss of a number of weeks during which they must abstain from business are set over against

the inconvenience of wearing an instrument, the probability of the hernia continuing to grow more troublesome and pronounced, and the ever-possible danger of strangulation. For my own part, I think the balance of account is usually in favor of operation, and I can not question that the profession is each year becoming more and more of this opinion.

Hernia in the Aged. As at other periods, the problem must always be considered as one of individual character. This becomes more especially so in the later years of life. Assuming that the hernial subject is free from organic disease, age *per se* weighs far less seriously as an adverse consideration in aseptic surgery than was earlier supposed. Primary repair of the tissues is almost certain to ensue with remarkably little constitutional disturbance. The contrast between septic and aseptic wounds is much more marked in advanced life, and aseptic surgery wins, perhaps, its most brilliant victories in the operative wounds upon the aged. I have operated upon a very considerable number of patients between seventy and eighty, under the most unpromising conditions, and even upon several between eighty and eighty-five, and in each instance with seeming easy cure.

BEAUMETZ, DUJARDIN: SOME MEANS EMPLOYED IN THE DIAGNOSIS AND CURE OF GASTRIC AFFECTIONS. (*Lyon Med.; American Medical and Surgical Bulletin.*)

For the diagnosis of gastric affections no better means is known than the morning test meal, which should always consist of the same food, and taken at the same hour—slightly sweetened coffee (or tea) with milk, and one or two slices of bread, the quantity of liquid being always the same and not exceeding 500 grams.

If three or four hours after ingestion there is a sensation of heat in the stomach, a feeling of exaggerated acidity, we have to deal with a hyperacid dyspepsia.

If, on the other hand, there is an abundance of gas, a sensation of heaviness and fullness, and marked slowness of digestion, subacidity is the cause of the disturbance.

If pain commences after a quarter of an hour, increasing with time, there is probably irritation or inflammation of the duodenum, and in that case, gastro-duodenitis.

Finally, painful cramps and even vomiting may supervene, which in themselves characterize the disturbance occasioned in the functions of the muscular and nervous centers of the stomach.

These indications are often more useful than the direct methods of analyzing the gastric juice.

Another way of getting at the cause of the trouble is to ask the patient when the disturbance commenced. In hyperchlorhydria the sensation of pain and burning is always experienced in three to four hours after meals.

In the real painful forms of dyspepsia, such as the gastralgia of chlorotic subjects, the painful crisis appears immediately after the ingestion of food.

The knowledge of the patient's profession and habits is another means of diagnosis.

Among the simple measures calculated to cure gastric affections belongs decubitus on the right side during sleep, to promote the passage of food from the stomach to the duodenum.

Warm drinks diminish (according to Linossier) the secretion of the gastric juice and augment gastric contractibility. They are indicated, preferably slightly aromatized, in hyperchlorhydria, and in an indolent and dilated stomach; while very cool water (12° C.; 53° F.) will exert a stimulating influence upon said secretion.

As alkaline waters in small doses, one half to one hour before meals, likewise excite this secretion, they too are indicated in hyperchlorhydria. They also activate the muscular movements of the stomach, resulting in a more rapid evacuation. In this case sodium bicarbonate or alkaline water should be taken during or after meals.

Massage is also one of the best means of combating indolence of the stomach and the stasis of food in the stomach.

Cripps, Harrison: Anastomosis of the Small Intestine. (*British Medical Journal.*)

When operating on a case of intestinal obstruction it may happen that the trouble can only be remedied by destroying the continuity of the gut. If the patient be in good condition, and the bowel not much distended, it may be proper, after resecting the part, at once to unite the divided ends, and return the bowel

into the abdominal cavity. So far as I have observed in practical surgery, the opportunity for such immediate radical treatment is exceptional. The prime consideration in most cases is how to give prompt relief to the obstruction, and tide over shock which threatens to be fatal in a few hours. It is of little benefit to perform the operation of anastomosis, with its delicate and accurate stitching, merely to demonstrate on the morrow's *post-mortem* that the bowel is impermeable to water. It is impossible to conceive a more inappropriate time for performing what must necessarily be a prolonged operation than when a patient is suffering from complete obstruction. The great distension of the abdominal viscera adds considerable difficulty to the operation, and causes the intestine to crowd out of the incision; while the vomiting and shock incidental to the obstruction has so reduced the patient as to leave but a perilous margin of vitality.

Another and perhaps stronger objection to performing an immediate anastomosis is the relative condition of the bowel above and below the obstruction. Above the gut is distended and paralyzed, while below it is empty and contracted by the action of the circular fibers. The paralyzed condition of the bowel above renders it powerless to pass its contents into the contracted portion below. The symptoms of obstruction therefore continue.

I believe, save in exceptional circumstances, it is better surgery to make a temporary artificial anus above the obstruction than to perform an immediate resection and join the divided ends. Such an artificial anus gives immediate relief to the obstruction. It affords time for the distended and paralyzed bowel to regain its power. By waiting a few days or weeks the patient can be carefully prepared, so that there is no food or feces above the portion to be united, and the operation can be undertaken with far better prospects of success than would have been possible as a primary operation.

As to the best method of uniting the bowel, there is much divergence of opinion, and a far larger experience than is at present available is necessary to decide the question. At present there are two main principles in vogue: the one is to employ absorbable bobbins, tubes, etc., within the canal of the bowel over which the intestine is sewn; the other is to dispense with these accessory articles. Those who advocate their use believe

them to present among others the following advantages: That they facilitate the suturing, thus shortening the length of the operation; that they make the union more accurate; that they keep open for the time the caliber of a bowel at the sutured parts. I do not, however, agree with these views. The adjustment over the plates, if done so as to afford perfect security, requires quite as many sutures as when no plates are employed, so that if the suturing be done with equal care by both methods time is not saved. As to the theory that the tubes keep the canal patent, facilitating the passage of feces, it seems quite as probable that an opposite effect is produced by arresting the peristaltic action. The chief objection to the tubes, however, seems that, owing to the tuberosity they produce, all the sutures are on the stretch. This is not the case where no tubes are used, and it is astonishing to see the small size to which an empty portion of intestine will contract in the living body. This contraction takes off all tension from the stitches, and allows them to become nearly buried at once in the peritoneal coat. As further information is still required as to the results, immediate and remote, of intestinal anastomosis, and as to the best time and method of operating, I have ventured to bring this case before the Society as a successful instance of a secondary operation performed without the employment of tubes or plates.

Summers, J. E. Jr.: McBurney's New Method of Incision in the Abdominal Wall in Cases of Appendicitis. (*Kansas City Medical Index.*)

It is a well-known fact that hernia is apt to follow any one of the usual incisions for any one of the varieties of appendicitis, and if by improvement of technique this tendency to hernia can be lessened or overcome, another advance will have been made toward coping successfully with this murderous disease. Dr. McBurney describes his new incision briefly as follows: An oblique incision in the skin about four inches long is made in the usual position and about one inch from the iliac spine. The external oblique muscle and aponeurosis are divided in the same line, *not cutting any fibers across.* After retracting the edges of the wound strongly, the internal oblique muscle is seen, the fibers of which cross somewhat obliquely the wound already made.

With a blunt instrument, such as Kocher's director, the fibers of the internal oblique and transversalis muscles can be separated without cutting more than an occasional fiber, in a line parallel with their course—this is nearly at right angles to the incision in the external oblique aponeurosis. The transversalis fascia and peritoneum are then divided. McBurney states that the drawback to this method of operating depends upon the absolute necessity for two pairs of retractors, the one for the first incision, the other for the opening made beneath and at right angles to it. He does not think it especially suitable for suppurating cases because of the somewhat limited space. He says: "It is not an easy operation, and should not be attempted by those who are unfamiliar with operations upon the appendix, and I again call attention to the fact that in performing it two extra assistants will be occupied part of the time with retractors." He has done the operation four times. In July just passed I did this operation, twice having learned of it before its inventor's paper appeared. The first case was upon an adult, the second a child three years of age; both recovered with strong cicatrices; and, although I operated for appendicitis a number of times during this period and since, yet the cases were not suitable for the incision. In thus calling attention to this improved operation in selected cases, I desire to state that the number of retractors can be reduced to two, and only one extra assistant required, if so soon as the first incision is made two temporary sutures are introduced through the edges of the wound, about its middle, and each introduced, tightened and tied; the one through the skin over the left rectus muscle, the other in the same line through the skin covering the right gluteus maximus muscle. This causes wide separation of the edges of the incision and does away with the inconvenience of the hands and retractors of an extra assistant. The wound is closed of course from the bottom, by layers of buried sutures, and thus "it will be seen that the gridiron-like arrangement of the muscular and tendinous fibers, to which the abdominal wall largely owes its strength, is restored almost as completely as if no operation had been done." I believe this operation suitable in most all forms of appendicitis if done early and before too extensive changes have taken place, requiring a very large opening for inspection and manipulation.

STEELE, D. A. K., CHICAGO: INDICATIONS FOR SURGICAL INTERFERENCE IN CASES OF APPENDICITIS. (*North American Practitioner.*)

A differential diagnosis between:

1. Appendicitis and typhlitis, peri-typhlitis and para-typhlitis can not be made with absolute certainty, but we remember that ninety-one per cent. of these cases are appendicitis.

2. From fecal impaction we differentiate by rectal examination, by colonic flushing, and by the administration of salines, aided also by the history and character of the pain present.

3. From tubercular or malignant tumors by the history.

4. From ovarian or tubal disease by the history and a careful examination, if necessary, under an anesthetic.

5. From extra-uterine pregnancy in the same way.

6. From hematocele or intra-abdominal hemorrhage by the history and pallor, shock and varying line of dullness, with absence of temperature, and rapidity and feebleness of pulse.

(*a*) In operating for acute perforating appendicitis make your incision three to four inches long at the outer border of the right rectus or an oblique in the same location over the center of cecum.

(*b*) Make median incision where there is general septic peritonitis from intra-abdominal abscess or ruptured abscess, flush the cavity and drain with strips of iodoform gauze, or tubular drain to bottom of abscess, or, better, through the right loin.

(*c*) Incise over the most prominent point of tumor where there is encapsulated pus or fluctuation, wash out with sterilized water, remove fecal concretion if it can be felt with the finger, pay no attention to the appendix as the perforation has already closed and it lies buried in a mass of plastic but infective exudate, pack the abscess cavity with iodoform gauze and redress daily.

(*d*) Drain with gauze, glass or rubber after repeated flushing with warm sterilized water; if the abscess extends behind the cecum or upward toward the liver, through and through tubular drainage via the loin gives best results.

(*e*) Close upper and lower angles of the wound by sutures.

(*f*) If perforation of cecum or bowel and subsequent fecal extravasation occurs, invert the edges of the perforation and close with fine continuous silk sutures inserted through the serous and muscular coats only; if the ulceration has rendered the tissues

too soft and friable to hold a stitch, touch the edges of the perforation with tincture of iodine and tampon with iodoform and iodoform gauze, drawing the edges of the wound together with rubber adhesive straps, over which a tight bandage of flannel should be applied, and the patient given five-grain doses of salol every four hours and kept on a milk or milk-porridge diet to lessen intra-intestinal gaseous distension.

My conclusions in regard to the indications for operation in appendicitis may be summarized as follows:

1. In cases where there is persistent pain, tenderness, temperature, increasing pulse, increasing tumor, and progression of the disease.
2. In all cases where pus is present.
3. In all cases where salines and flushing of the colon does not give prompt relief.
4. In recurrent or relapsing cases in the interval following an attack.
5. Whenever the appendix is found diseased.
6. Whenever the appendix is found diseased during a laparotomy for any other condition, it should be removed at the same time.
7. Operate immediately in all perforative cases.
8. Operate in all gangrenous cases.
9. Operate early and thus lower the mortality, which is less than eight per cent. during the first week and over seventeen per cent. during the second week in cases operated.

SENN, N., CHICAGO: PRELIMINARY SUTURING OF THE INTESTINAL OPENING AS A PROPHYLACTIC MEASURE AGAINST INFECTION DURING THE OPERATION FOR ARTIFICIAL ANUS. (*Chicago Medical Recorder.*)

There can be little doubt that the operative treatment of intestinal fistula or artificial anus requiring opening of the abdominal cavity has been attended by an alarming mortality, owing to infection caused by the escape of feces through the intestinal opening. Packing the opening with gauze or cotton is a very inefficient way in which to prevent fecal extravasation. The use of clamps and ligatures on each side of the opening in the bowel is equally unreliable. It appears to me that the only safeguard

against this course of danger is preliminary closure of the intestinal opening by suturing, placing the sutures so close together as to absolutely prevent the escape of any of the intestinal contents. After this has been done, the field of operation is once more thoroughly sterilized before the abdomen is opened and the intestine detached.

The sutures should include all of the tunics of the bowel. With few exceptions this row of sutures will remain as Czerny sutures, to be buried after the bowel has been detached by Lembert stitches.

I have already made a statement that I look upon flexion of the bowel as the most important factor in producing this spur, and that measures which are calculated to correct the flexion will prove useful in removing the spur. In artificial anus, produced accidentally or intentionally, the flexion is caused by the prolapse of the intestinal loop into, and sometimes even beyond, the opening in the abdominal wall.

If the intestine is detached, the flexion is diminished or completely corrected, and its recurrence is prevented by transverse suturing of the intestinal opening. A study of my cases has convinced me that the provisional closing of the intestinal opening by transverse suturing before using the knife is the most efficient prophylactic measure against infection, and that resection of the intestine for fistula and artificial anus can be avoided in the majority of cases, and that in its place transverse suturing and correction of the flexion will yield better results.

Weissinger, W. S., Hernando, Miss.: A Case of Strangulated Femoral Hernia. (*New York Medical Journal.*)

The case, a female aged sixty-one years, had had a femoral hernia for seventeen years, which had been easily reducible until 1893, when it become irreducible, but caused no inconvenience until November, 1893. Patient had "grippe," and while her bowels were acting in response to a cathartic given in treatment for this trouble she was seized with violent radiating pains and cramps in and throughout the abdomen, accompanied with symptoms of collapse.

The attending physician was called, and relieved the symptoms partially by opiates administered hypodermatically, as she

was not able to retain any thing on her stomach. Attempt at reduction of the hernia was unsuccessful, as were attempts under anesthesia. As operative interference was refused, her physician withdrew.

Sixteen days later the writer was summoned, and found the patient very much exhausted, with a pulse of 120 and temperature of 96°. Pinched and cadaveric expression, fetid breath, very restless, and still persisting in her desire to die and be let alone.

Operation was, however, decided upon, but was delayed until the following morning, as there was no suture material at hand, nor a Murphy button with which to do an approximation, as the bowels would very probably be found necrotic. By stimulation it was hoped that her condition could be improved, so a grain of morphia with atropia was administered; whisky was given freely, hot applications to her extremities, and nutrient enemata. She had short naps through the night, and was slightly improved when put on the operating-table the next morning, which was the seventeenth from the onset of the first symptoms. Pulse was 115, and of better character, and the temperature 96.5°.

During the whole time of her trouble there had been no action from her bowels, and the matter vomited was very stercoraceous in character.

After the usual precautions the patient was anesthetized with chloroform, the tumor cut down upon, the incision being over the femoral ring and exposing the sac. The sac contained about two drachms of a brownish, foul fluid. Omentum and intestine were found in the sac, the former nearly black, the latter a dark maroon.

The constriction was divided, the adhesions between the bowel and the omentum being easily broken up. As the bowel did not improve after the application of hot cloths, it was returned to the cavity, the omentum being tied off at the ring. The sac was then transfixed and cut off, and together with the stump of the omentum stitched to the upper and lower edges of the ring and tightly closed. A small strip of sublimate gauze was used as a drain, iodoform gauze, borated cotton as a dressing. Time of operation two hours.

Dangerous depression followed the operation, but the patient gradually rallied under stimulants and artificial heat, and slowly

improved until her recovery was complete. The day following the operation the patient's bowels moved copiously, and have continued to act regularly since.

The author concludes as follows: The case is of interest because of the unprecedented period of sixteen days and eighteen hours from the inception of the first symptoms of strangulation and the division of the constriction; the persistence of stercoraceous vomiting for fifteen days; the non-retention of any thing at all in the stomach; the complete inaction of the bowels during the whole period of the illness; the marvelous escape of a portion of the constricted bowel from death; the death of a portion of the omentum, and, lastly, her final reaction, after operation, and marvelous restoration, for one of her advanced age, to her usual good health.

Graham, D. W., Chicago: Strangulated Hernia of the Appendix Vermiformis. (*Chicago Medical Recorder.*)

This case was that of an elderly woman. When she came under my care there was a swelling in the right groin, fluctuating and red, with every evidence of pus, and a strangulated femoral hernia. I opened down into the abscess, evacuated it and washed it out. I could not find any intestine. The first thing that arrested my attention was a small foreign body, which looked like a piece of chicken bone, with fecal matter surrounding it and very suggestive of having come from the appendix. On further investigation I found what, on separating it from the surrounding inflamed tissues, proved to be the end of the appendix in the cavity, and with a perforation in it. It was blackened and swollen. A further search showed an old irreducible omental hernia not larger than the first joint of the thumb.

The chief problem to me was how to treat these contents of the hernial sac in the presence of so much pus and suppurating tissue.

It would be counted good surgery, I think, to have left the appendix and the nodule of omentum just as they were found and treated the abscess cavity as an open wound; but I decided the better plan would be to take a little risk of infecting the abdomidal cavity and treat the sac and its contents as if no suppuration had been present. So, after thoroughly curetting, trim-

ming, and washing all surrounding tissues, I pulled the appendix out and ligated its base in the usual way. The nodule was also amputated and the sac cut off and closed. The cavity was treated as an open wound, and no effort was made to close the femoral ring.

The patient rallied from a critical condition, and did fairly well for seven or eight days. At this time, fearing intra-abdominal suppuration from a change of symptoms, I opened the peritoneum through the femoral ring and introduced a small gauze drain, though no pus was found at the time or later. The patient died comatose at the end of two weeks. The autopsy showed the peritoneum free of infection of any kind, and no pus or inflammation about the stump of the appendix or that of the omentum. The kidneys were found to be very small, and the microscope showed an advanced degree of chronic interstitial nephritis.

It is not uncommon to see the appendix as a part of the contents of the sac in non-strangulated hernia, but this is the first time I have ever found it strangulated, or as the only strangulated viscus.

Benedict, A. L., Buffalo: The Use of the Menthol Spray through the Stomach-Tube. (*International Medical Magazine.*)

Menthol, like the active principles of most volatile oils, is antiseptic, and, after the first sensory excitation has passed off, locally anesthetic. It also increases the blood supply and nutrition. The spray of menthol dissolved in a mineral oil has already achieved a reputation in the treatment of catarrh of the air-passages, while watery and alcoholic preparations of peppermint are time-honored and effective, although not powerful, means of treatment of various gastro-intestinal ailments. I ask your attention, therefore, not to a new and untried drug, but to a method of using it which insures its even distribution over a clean stomach surface without the weight of a volume of liquid sufficient to distend the stomach, and with the use of a medium as inert and unirritating as possible, namely, a purified petroleum oil. I would recommend this gaseous lavage (1) in gastric fermentation due to yeasts or bacteria; (2) in painful affections, especially

when the pain is griping and burning and due to fermentation; (3) in catarrhal inflammations, except the acute forms in which all mechanical or irritating modes of treatment are emphatically contra-indicated. It must be borne in mind, however, that chronic gastritis is often due to some irremediable circulatory disturbance, and in these cases the spray, like any other treatment, must be palliative only. In dilatation the catarrh and fermentation would seem to indicate the use of the menthol spray unless there was danger of mechanical injury by the touch of the tube on the distension of the stomach. I speak, however, without experience. In atonic conditions, using the word atonic in its broadest sense, the local stimulation of the menthol seems to tone up muscle-fiber, increase the nutrition of the stomach by calling more blood to the organ, and in the same way call forth greater secretory activity. At the same time the discomfort and fermentation which so often accompany atonic dyspepsia are relieved.

KORTE: INTESTINAL OBSTRUCTION DUE TO GALL-STONES. (*Deut. Med. Woch.; British Medical Journal.*)

A man, aged fifty-two, had suffered from several attacks of biliary colic, calculi having been found in the stools. Six days previous to admission he was seized with severe abdominal pain, after which no feces or flatus was passed. Vomiting, fecal during the past three days, then hiccough followed. On admission he was moderately collapsed. There was no hernia, and nothing abnormal was felt either in the cecal region or in the rectum. The sudden onset with early fecal vomiting and with but slight abdominal distension pointed to gall-stones as the cause of the ileus. The abdomen was opened, and in some coils of intestine which had dropped down into the pelvis a gall-stone was found at some 20 to 30 centimeters above the ileo-cecal valve. The stone was removed by a longitudinal incision. The intestinal wall was tightly stretched over it. There was no ulceration or invagination of the mucous membrane. The course was very satisfactory, the bowels acting on the fifth day. The stone was rounded and without facets. In addition to the above-named symptoms, the comparatively good condition of the patient is more or less characteristic of this form of ileus. A stone already present in the canal becomes arrested by a rapidly on-coming attack of colic.

The bowel above becomes paralyzed, hence early fecal vomiting. Opium was useless here as in the author's other three cases, which were operated upon with two recoveries. The diagnosis may be very difficult, and, in the author's opinion, only to be based on probabilities. Operation must be decided upon in each case by the non-success of so called expectant treatment, and by the symptoms. The propriety of operating in the above recorded case after seven days of obstruction can not be doubted.

McArthur, L. L., Chicago: Incisions of the Abdominal Wall in Operation for Appendicitis. (*Chicago Medical Recorder.*)

The selection of location for the incision, in my opinion, should be determined by the point of nearest approach to the surface, as evidenced by palpation, by percussion, and by greatest tenderness, without regard to where that may be, for we have long since learned that this may vary widely from the diagnostic point of tenderness now historic. If any deviation be made from such selection, I think inclination would guide one to keep close to the layer of peritoneum lining the right iliac fossa. If you recall for a moment that in the majority of instances no structures lie externally to the caput coli and appendix, where the peritoneum is reflected from it, it will be readily seen that as the pus forms around them the parietal peritoneum is very likely to form a part of the external wall of the abscess, and the moment it is perforated the abscess is opened and drainage easily provided for.

The direction of the incision for appendicitis has always been parallel to innervation and the fibers of the external oblique. On reaching the external oblique its tendinous fibers are separated and held apart with small retractors; the intermuscular septum is next cut with the blade, and the fibers of the internal oblique with the transversalis, which over the appendical area are practically parallel, are separated with the handle of the scalpel and stretched apart with a finger in each angle of the wound, and helped with wide retractors. The transversalis fascia is then cut, when the peritoneum comes into view. Next we determine a position in which this structure is adherent to or forms part of the abscess wall and penetrates at such a point. By this means the abscess

is opened without entering the general cavity in the great majority of cases.

Four times in fifty-nine cases of abscess the peritoneum proved non-adherent, and an opening in the general cavity was the result. With this peritoneal opening enlarged enough to admit the finger the exact location at which the parietal peritoneum was adherent was determined, the general cavity closed with carefully applied sutures, and then the abscess opened where an adhesion was known to exist. In every case no ill result followed. In eleven cases in which the operation was for the removal of the appendix between the attacks of a recurrent appendicitis the walls and peritoneum were thus penetrated and the results perfect in every case.

Conclusions. For this incision the following claims are made:

(1) Less hemorrhage; (2) clearer anatomy; (3) least possible danger of subsequent hernia; (4) if necessary to enlarge wound only one layer of muscles need be sacrificed; (5) less suturing; (6) patient need not be so carefully confined to one position; (7) less cellulitis.

Beck, Carl: Carcinoma of the Cecum. (*Chicago Medical Recorder.*)

A specimen was presented to the Chicago Medical Society which was removed from a man sixty years old. For a long time he had no other symptoms except a constant diarrhea and slight attacks of fever, which led the attending physician to suspect him to be suffering from an attack of typhoid fever. On examination a very small tumor was found in the cecal region. It was hard, immovable, and apparently the shape of the cecum. Inasmuch as the vomiting and the dilatation of the ileum indicated an obstruction an operation was advised, which was done, a carcinoma of the ileo-cecal valve being found just large enough to obstruct the intestines, so that a small lead pencil could not be pushed through it.

The pathological interest lay in the appendix, which was removed at the same time. It was entirely solid and free, but on the ostium internum of the appendix there were papillomatous growths, which indicated that there had been an inflammatory process present. On examination the appendix proved to be

solid—an appendix obliterans. The carcinoma was scirrhous, with very little cellular infiltration. For approximation Murphy buttons were used, side to side anastomosis. The patient, ten days after the operation, at the time of making the report was in good condition.

Winslow, W. C.: Dysentery. (*Kansas Medical Journal.*)

The preventive treatment consists in avoiding all known causes and living under the best hygienic influences, the procuring of pure drinking-water and the removal of all excreta. In treating an attack absolute cleanliness and all hygienic rules governing the sick should be observed. Patient should be put to bed early. Sponging the surface of the body with cool or tepid water with vinegar or alcohol quiets the patient by removing the sensation of burning heat in the skin. The anal region should be frequently and carefully cleansed with a disinfectant, washed and anointed with vaseline. Injections, with a rectal tube, of starch-water and laudanum go far toward removing the tenesmus. For clearing the intestinal tract sulphate of soda and calomel have many advocates. During the attack opium is given to relieve the intense pain and to induce sleep.

The most rational method of treatment is by the rectum. Place the patient on his right side or his back with hips elevated, introduce a small rubber tube gently, and with Allen's surgical pump inject small quantities of fluid as the tube advances. Introduce from eight to twelve inches of the tube. A solution of boracic acid is used at a temperature of from 95° to 102° or 103°. In cases which have become chronic one drachm of acetate of lead to the pint of fluid is used. If great pain follows the treatment insert the tube and throw up a quantity of cocaine solution, about one fourth to one half, or even one per cent.

Smith: Intestinal Ulceration in Albuminuria. (*Allgemeine Med. Central Zeitung*, No. 14, 1894.)

Smith discovered in 1876 that patients suffering from Morbus Brightii often had intestinal ulceration. He reports twenty-four cases of ulceration in patients suffering from Bright's disease, and eight cases of the same trouble where there was intestinal bleeding without ulcers. The lesions occur most often in the lower

part of the ileum, though they may be found in other places in the intestinal tract. In all the cases there was often found symptoms of previous hemorrhages or pigmentation with the remains of extravasation. In 2 patients the ulcers were in the stomach, and at the same time there was bleeding from the mucous membrane of the stomach. The kidneys of all the cases showed plainly a granular atrophy or chronic parenchymatous nephritis (large white kidney); 12 cases showed cardiac atrophy; 9 retinal hemorrhage. From this it is probable that ulceration of the bowels is among the characteristic symptoms of cardio-vascular changes of Bright's. They occur as the rule late in the disease and lead often to intestinal perforation with consecutive peritonitis. Hall White found in 12 cases of so-called colitis ulcerosa that granular atrophy existed.

Wiggin, Francis Holme, N. Y. County: Intestinal Anastomosis. (*The Medical News.*)

The above is the title of a paper read by Dr. Wiggin before the New York State Medical Association. In the paper he reported a clinical case and also results of twenty experiments on dogs. He objects to the Murphy button (1) because a foreign body is left in the intestine, which is sometimes retained, necessitating a secondary celiotomy for its removal; (2) the spring of the button may be made so strong as to cut through the coats of the bowel; (3) the weight of the button may anchor the intestine in a flexed position, and so cause obstruction, as in a case narrated; (4) there was some danger of the lumen of the button becoming plugged with hard fecal matter; and (5) the sharp edges of the lateral openings in the button are very liable to cut through the bowel. Dr. Wiggin prefers Maunsell's method, which he says is suitable for any portion of the canal, and can be safely and easily performed by an experienced surgeon.

Robson, Mayo: Gastrostomy for Foreign Bodies. (*Boston Medical and Surgical Journal.*)

At a recent meeting of the Leeds and West Riding Medico-Chirurgical Society Mr. Mayo Robson read an interesting paper upon a remarkable case of foreign bodies removed from the stomach of a child by gastrostomy. The patient was ten years

of age, and had been admitted into the hospital for gastric symptoms, which were not of a very definite nature. For eight months the symptoms had persisted without yielding to any treatment. However, while under observation in the hospital, the patient vomited a nail. It was then decided to open the stomach, and as a result of the operation the following curious collection of heterogeneous objects were removed: 47 cast-iron garden nails, $1\frac{5}{8}$ inches long; 93 brass and tin tacks, $\frac{1}{2}$ inch to 1 inch long; 12 large nails, some brass-headed; 3 collar studs, 1 safety pin, 1 sewing needle. All these, of course, had, during the previous eight months, been swallowed by the child. The operation wound healed by first intention, the patient making a complete recovery.

Holt, L. Emmett: Constipation in Infancy. (*Woman's Medical Journal.*)

The normal stools in infancy usually contain twenty to forty per cent. of fat. Infant's food must contain much more fat than can be absorbed. If cream containing twelve per cent. of fat is substituted for a portion of the cow's milk the stools usually become softer. Milk sugar has little or no effect in relieving constipation. Yale, of New York, considers that massage faithfully carried out is a valuable measure for the relief of constipation. It should be practiced on an empty stomach, and should consist in small, circular movements made with the tips of the fingers along the course of the ascending, transverse, and descending colon. The conventional position at stool is often responsible for rectal constipation. Yale is not quite sure that the habitual use of enemata causes chronic constipation. Starr has used with much satisfaction a suppository containing extract of belladonna and purified aloes mixed with cocoa butter.

Saint-Phillipe, R.: Infantile Diarrhea and Sterilized Milk. (*Woman's Medical Journal.*)

The author in his paper, "Infantile Diarrhea and the use of Sterilized Milk in Children," states that he has observed twelve hundred cases of infantile diarrhea during the great heat of last summer in Paris. He classifies the diarrhea as follows: (1) Children at the breast. (2) Children at the bottle. (3) Children weaned

and from twelve to twenty-four months of age. The main indications are to clean out the intestinal tube and supply a sterilized milk which is free from all pathogenic organisms. Sterilized milk is, he considers, more easily assimilated than boiled milk or raw milk. He advises not to dilute sterilized milk, and to use the method of Soxhlet and thus secure intestinal antisepsis. In some cases the use of milk may be suppressed for several days. He concludes thus: "To raise children with success without the breast is a veritable art, and veritable artists generally fail."

Frank, Jacob: Bad Effects of the too Frequent Sterilization of the Murphy Button. (*The North American Practitioner.*)

Having recently had the opportunity of using Dr. Murphy's button in an end-to-end anastomosis, and having also had the opportunity of viewing the button *in situ post-mortem*, I noticed that the two bowls of the button were not in close enough apposition. The cause of this was due to the weakening of the spring of the button, as a result of many sterilizations; as in preparing for a laparotomy I always have a button put in with the other instruments. I would suggest the following to make the button aseptic, in place of sterilization: The button first to be thoroughly washed with soap and water, then boiled in a soda solution, then immersed in a ninety-five-per-cent. carbolic solution for an hour, and kept in alcohol until the time of operation, when, before it is placed *in situ*, it should be rinsed in plain sterilized water.

Harris, M. L., Chicago, Ill.: A Case of Strangulated Femoral Hernia in a Girl Five and a Half Years Old. (*Chicago Clinical Rev.; Archives of Pediatrics.*)

She had the hernia for three years, when it became strangulated, and five days later it was operated upon and reduced. She did well until the eighth day, when she passed considerable offensive gas. She continued to grow worse; on the tenth day she had peritonitis, probably from sloughing, and the next day a laparotomy was done. On opening the abdomen escaping gas showed that perforation had taken place. At the old line of constriction of the bowel there was a slough which was resected, but the patient died a short time after the operation.

Book Reviews.

The Student's Medical Dictionary, Including all the Words and Phrases Generally Used in Medicine, with their Proper Pronunciation and Definitions. By GEORGE M. GOULD, A. M., M. D., of Philadelphia. Eighth edition. Philadelphia: P. Blakiston, Son & Co. 1894.

The fact that this work has now reached its eighth edition is sufficient commendation for it. It is substantially the same as was first written by Dr. Gould in 1891, styled "A New Medical Dictionary," and so far as we have been able to discover there have been few changes from the original. It is the most compact work of its kind we know, an element which is essential to the student and busy practitioner; it is accurate and the definitions concise and pithy.

It is not alone a dictionary, but contains many useful tables for reference, of the principal arteries, the principal characteristics of the more important bacilli, table of ganglia, table of the characteristics of the principal micrococci, table of muscles, table of nerves and nerve plexuses, all arranged alphabetically.

The appendix contains valuable data in regard to the mineral springs of the United States, this latter being written by Judson Deland, M. D., of Philadelphia.

The type, press work, and paper are of the usual excellence of this house.

The Physician's Vade Mecum. Being a Hand-Book of Medical and Surgical Reference, with other Useful Information and Tables. By SEBASTIAN J. WIMMER, A. M., M. D. With additions by FRANK S. PARSONS, M. D. Philadelphia: The Medical Publishing Company. 1894. Price, $1.

We believe that medical literature would be better off without the many compends and other books which can not for want of space give a true conception of the subject treated of. It is true that they are a help to the student, who is "cramming" for his examination, but how much of the knowledge thus gained is retained? In most instances only until the examinations are over with.

Many pages in the little book before us are devoted to prescriptions, many by recognized authors, all under classified heads, but given without any remarks as to their indication. Take, for instance, hemorrhoids, six formulæ are given, which to the reader, as nothing else is mentioned about the subject, would indicate that the formulæ would meet all conditions.

Thirty-three of the small pages are devoted to the "Care of the Infant from Birth through the First Dentition," written by Dr. Frank S. Parsons. We think it wrong to give the general impression conveyed by so little space given to so important a subject, that this is a subject which can be treated of lightly; thus confirming an opinion already held by so many, that diseases of infancy and childhood and the care of infants is a branch of medicine easily mastered. The "Physician's Interpreter" is a useful chapter, giving much-used phrases in the practice of medicine in English, German, and French. It is very similar, though on a much smaller scale, to "Deutsch's Medical German," the latter, however, not having the French accompanying each phrase, and errs, as do the other chapters, in condensing the subject-matter so much.

Strictly as a book of reference to refresh one's memory the book will no doubt have a field, but there are few physicians or druggists whose library does not contain standard text-books and treatises, and there are few who have not the time to look up in a systematic and thorough way the mooted subject.

Antisepsis and Antiseptics. By CHARLES MILTON BUCHANAN, M. D., Professor of Chemistry, Toxicology, and Metallurgy, National University, Washington, D. C., with an Introduction by PROFESSOR AUGUSTUS C. BERNAYS. Newark, N. J.: The Terhune Company, Publishers.

In this day and generation no surgeon or physician should be content unless he has in his library a perfect work on antisepsis and antiseptics. Indeed it would be much better if every surgeon possessed many such works. Time will come when an operation that is performed without antiseptic precautions will lay the surgeon liable to a malpractice suit, and it might be said justly so. The little volume before us is a practical manual, and is more than worth its price to any physician. The whole history of antisepsis is treated of, and much interesting reading is em-

braced concerning the history of surgery from the earliest times to the present day. Every known antiseptic is included and described in this little book. The views of many of the most prominent surgeons of the world are embodied in it. The only criticism that can be offered of the book is that it contains pictures which would smack of an unscientific production. The learned gentleman who contributes the introduction, Prof. Bernays, of St. Louis, sums up the substance of antisepsis in two lines, "Study pathology and study asepsis by the aid of antisepsis."

Sexual Neurasthenia: Its Hygiene, Causes, Symptoms, and Treatment, with a Chapter on Diet for the Nervous. By GEORGE M. BEARD, A. M., M. D. Edited, with Notes and Additions, by A. D. ROCKWELL, A. M., M. D. Fourth edition, with Formulas. New York: E. B. Treat. 1895. Price, $2.75.

In noticing this work and its scope we can hardly do better than quote from the editor's preface in part. "Few morbid conditions cause more unhappiness or are attended with more disastrous results than disturbances of the sexual function. He who sees only here and there, and now and then, cases of this kind has but little conception of the vast sum of misery around him, which is either silently borne or finds expression in some mad act of crime or in suicide."

To this edition has been added a chapter on Sexual Erethism.

It is an excellently written book, the illustrative cases are well chosen, and the subject is treated of in a masterly way.

Syrup of Hydriodic Acid and Chemically Pure Hypophosphites. By R. W. GARDNER, Pharmaceutical Chemist, 158 William Street, New York. Twelfth edition.

The importance of hydriodic acid and hypophosphites in therapeutics can not be overestimated, and in this little book before us Mr. Gardner, than whom no one is better posted as to the chemistry and therapy of these drugs, has given us much valuable information. In the book is embodied some valuable clinical reports by the late L. De Bremon, M. D., of New York, W. H. Bentley, M. D., William Porter, A. M., M. D., Malcolm Graham, M. D., J. C. Wilson, M. D., Louis G. Pedigo, A. M., M. D., Joseph M. Patton, M. D., Q. Cincinnatus Smith, M. D., Wm. C.

Wile, M. D., I. N. Love, M. D., L. A. Turnbull, M. D., Charles H. Knight, M. D., and others.

The book can be had by writing the author, Mr. Gardner.

Surgery Two Hundred Years Ago. Cloth, pp. 48. Issued by the Antikamnia Chemical Company, of St. Louis.

This little book is neatly bound in green. Throughout the book on alternate pages are depicted cuts from the original copper plates, illustrating the more important operations in surgery as done two hundred years ago, and accompanying each plate is a full description of the cut and method of operating. Among the illustrations are counter-irritation and scarification instruments, tourniquets, obstetrical and placental forceps, tampons and pessaries, and other instruments used in the early days of surgery.

In the little work is also published clinical reports of the use of antikamnia. The book contains a rare collection of old illustrations, and can be had by correspondence with Mr. Frank A. Ruf, of the Antikamnia Company.

A Synopsis of the Practice of Medicine. By William Blair Stewart, A. M., M. D. New York: E. B. Treat, 5 Cooper Union. 1894.

This book is something more than a compend; it is a thorough synopsis of the practice of medicine, as thoroughly condensed as it is possible, it seems to us, to condense this subject and give any idea of the subject-matter which is worth retaining.

The typographical work is of the usual excellence of this house, and the book of 434 pages makes a neat appearance.

A System of Legal Medicine. By Allan McLane Hamilton and others. Vol. I. New York: E. B. Treat & Co. 1894.

This work was reviewed in an early issue of the Quarterly. We can but repeat, "these two volumes will prove an indispensable portion of all complete libraries, and no criminal lawyer or medical expert can afford to be without it."

Books and Pamphlets Received.

An Embarrassing Conversation.—A good joke is related at the expense of a modest young Dakota newspaper man, which is going the rounds and is credited to "Ex." It is to the effect that the pusher of the pencil went out to report a party the other evening where the home had been recently blessed with a new baby. Accompanied by his best girl he met the hostess at the door, and after the usual salutations asked after the new baby's health. The lady, who was quite deaf and suffering with the grippe, thought he was asking about her cold, and told him that though she usually had one every winter this was the worst one she ever had; it kept her awake at night and confined her to her bed. Then, noticing that the scribe was getting pale and nervous, she said that she could tell by his looks that he was going to have one just like hers, and asked him to go in and sit down. The paper was out as usual the next week, but the local editor has quit inquiring about babies.—*Truth.*

That there is at present a widespread and growing interest in African Kola is evidenced by the recent appearance simultaneously, at home and abroad, of a large amount of literature on the subject. By far the most comprehensive publication relating to the drug that has come to our notice is the monograph study of Kola, published by Johnson & Johnson, New York, which is now before us.

Dr. Parkhurst's first article to women in The Ladies' Home Journal has proved so popular that the entire huge edition of the February issue of the magazine was exhausted within ten days, and a second edition of 45,000 copies has been printed.

Correspondence between Dr. E. W. Cushing, of Boston, Mass., and Lawson Tait, M. D., of Birmingham, Eng., which is a letter addressed by Mr. Tait to the "Members of the Council of the British Medical Association," January 15, 1895.

The Mechanical Treatment of Hernia. Illustrated. With Notes on the Miller Treatment. Also Clinical Lecture on Infantile Anal Fissure, Hernia, Ischio-Rectal Abscess, and Pruritus Ani. By Charles C. Allison, M. D., Omaha, Neb.

Pneumonectomy, Barton's Operation for Ankylosis of Knee in Bad Position; Resection of Shoulder, with Results. By W. L. Rodman, A. M., M. D., Louisville. Reprint from the American Practitioner and News.

Deformities of the Face and Orthopedics. Treatment of Spinal Curvatures with New Shell Jackets, etc. By Frank L. R. Tetamore, M. D., New York. Reprint from the New England Medical Journal.

Removal of the Head of the Femur from the Lesser Sciatic Notch. Castration for Hypertrophied Prostate. By B. Merrill Ricketts, M. D., Cincinnati, Ohio. Reprint from the Medical Fortnightly.

A New Apparatus for administering Anesthetics in Face and Mouth Operations. By Edmond Souchon, M. D., New Orleans, La. Reprint from the Journal of the American Medical Association.

The Relation of Journal Publishers to Advertisers and Advertising Agents. By Landon B. Edwards, M D. Read before the American Medical Publishers' Association, Hot Springs, Va.

Hydrops Articulorum Intermittens. Report of a case. By Samuel Kennedy, Ph. G., M. D., Shelbyville, Indiana. Reprinted from the Journal of the American Medical Association.

On Certain Morphologic and Microchemic Peculiarities of the Blood in Diabetes and Glycosuria. By Ludwig Bremer, M. D., St. Louis, Mo. Reprint from the Medical News.

A Case of Exophthalmos in an Infant of Three Months. By Harriet E. Garrison, M. D., Dixon, Ill. Reprinted from the Journal of the American Medical Association.

The So-called Antitoxin in the Treatment of Diphtheria: Four Cases. By W. Cheatham, A. B., M. D., Louisville. Reprint from the American Practitioner and News.

The Surgical Treatment of Hemorrhoids. By S. D. Van Meter, M. D., Denver, Col. Reprint from the Annual Report of the Colorado State Medical Society.

The Pathology and Treatment of Purulent Inflammations of the Conjunctiva. By Crittenden Joyes, M. D. Reprint from the American Practitioner and News.

Treatment of Stricture of the Urethra by Electrolysis. By P. L. Bromlette, M. D., Huntsville, Ala. Reprint from the International Journal of Surgery.

A New Method for Anchoring the Kidney. By R. Harvey Reed, M. D., Columbus, Ohio. Reprint from the Journal of the American Medical Association.

Diseases of the Alimentary Canal. By James Osborne De Courcey, M. D., St. Libory, Ill. Reprint from the Journal of the American Medical Association.

Exploratory Incision in Abdominal and Pelvic Disease. By Louis Frank, M. D., Louisville. Reprint from the American Medico-Surgical Bulletin.

Wound of the Left Subclavian Artery. By J. N. Baughman, M. D., Flat Lick, Ky. Reprint from the Journal of the American Medical Association.

Analysis of the Cases Operated with Murphy Button up to date. By John B. Murphy, A. M., M. D. Reprint from the Chicago Clinical Review.

The Diagnosis and Treatment of Floating Kidney. By R. Harvey Reed, M. D., Columbus, Ohio. Reprint from the Columbus Medical Journal.

The Treatment of Pterygia with the Galvano-Cautery. By Arthur G. Hobbs, M. D , Atlanta, Ga. Reprint from the Ophthalmic Record.

The Sociological Status of Medical Practice. By Theodore W. Schaefer, M. D., Kansas City, Mo. Reprint from the American Therapist.

A Case of Contusion and Rupture of the Ileum. By Frederick Holme Wiggin, M. D. Reprint from the New York Medical Journal.

Vaccination. By W. P. White, M. D., Health Officer of the City of Louisville. Reprint from the Louisville Medical Monthly.

Intestinal Anastomosis, with Report of a Case. By Frederick Holme Wiggin, M. D. Reprint from the New York Medical Journal.

Five Years' Work in Diseases of the Rectum. By Charles B. Kelsey, M. D., New York. Reprint from the New York Medical Journal.

Reminiscences of Dr. J. Marion Sims in Paris. By Edmond Souchon, M. D., New Orleans, La. Reprint from the Medical Record.

Operation for Mammary Tumor. By W. L. Rodman, A. M., M. D., Louisville. Reprint from the American Practitioner and News.

Herniotomy, Osteotomy. By Samuel E. Milliken, M. D., New York. Reprint from the International Journal of Surgery.

Abuses of Proprietary Remedies. By H. H. Roberts, M. D., Paris, Ky. Reprint from the American Practitioner and News.

The Use of Pepto-Mangan for Anemia in Pulmonary Tuberculosis. By Karl Von Ruck, B. S., M. D., Asheville, N. C.

Twenty-first Annual Report of the Superintendent of the Cincinnati Sanitarium for the year ending November 30, 1894.

The Clamp and Cautery Operation for the Radical Cure of Hemorrhoids. By B. B. Foster, M. D., Portland, Me.

Adenoids, with a Description of New Instruments for their Excision. By Arthur G. Hobbs, M. D., Atlanta, Ga.

Fistula in Ano. By J. N. Baughman, M. D., Flat Lick, Ky. Reprint from the American Practitioner and News.

Insanity. By O. Evarts, M. D., Superintendent of the Cincinnati Sanitarium, 1880–1885.

Ulceration of the Rectum. By Charles C. Allison, M. D., Omaha, Neb.

Gold as a Therapeutic Agent. By W. H. Walling, M. D.

The following books have been received too late for a review in this issue, but will be noticed in the next issue:

Materia Medica and Therapeutics for Physicians and Students. By John B. Biddle, M. D. Revised and enlarged by Clement Biddle, M. D. Philadelphia: P. Blakiston, Son & Co. 1895. Price, $4.50.

Suggestive Therapeutics in Psychopathia Sexuales. By Dr. A. Von Schrenck-Notzing. (Munich.) Authorized translation by Charles Gilbert Chaddock, M. D. Philadelphia: The F. A. Davis Co. 1895. Cloth, $2.50; sheep, $3.50.

Surgical Nursing. By Bertha M. Voswinkel. With 111 illustrations. Philadelphia: P. Blakiston, Son & Co. 1895. Price, $1.00.

Dose-Book and Manual of Prescription Writing. By E. Q. Thornton, M. D., Ph. G. Philadelphia: W. B. Saunders. 1895. Price, $1.25.

A Manual of Modern Surgery, General and Operative. By John Chalmers Da Costa, M. D. Philadelphia: W. B. Saunders. 1894. Price, $2.50.

Surgical Pathology and Therapeutics. By John Collins Warren, M. D. Philadelphia: W. B. Saunders. 1895. Price, $6.00, cloth.

Clinical Gynecology, Medical and Surgical. Edited by John M. Keating, M. D., and Henry C. Coe, M. D. Philadelphia: J. B. Lippincott & Co. 1895.

Notes and Queries.

Acceptance and Resignation.—The following is a copy of a letter which is self-explanatory, and consequently needs no comments:

150 East Broad Street, Columbus, Ohio, December 19, 1894. Dr. S. S. Thorne, President National Association Railway Surgeons, Toledo, Ohio.—*Dear Doctor:* Having been officially notified of my unanimous election to the position of editor of the American Academy of Railway Surgeons, and having decided to accept the same, I beg leave to tender my resignation as the duly elected editor of *The Railway Surgeon*, the official organ of the National Association of Railway Surgeons, to take effect January 1, 1895.

With my best wishes for a continuance of the prosperity of the National Association of Railway Surgeons and the future success of *The Railway Surgeon*, its official organ, I have, my dear Doctor, the honor to remain very respectfully and fraternally yours,

R. Harvey Reed.

A journal which already is making an impression upon medical literature is *The Atlantic Medical Weekly*, a journal of reform and progress in the medical sciences, though it has been in existence only a short time. It is most ably edited by J. Frederick Haller, A. B., M. D., who has associated with him in the editorial department Drs. Alexander B. Briggs and Charles P. Thayer. Among the list of collaborators are men prominent in medical science and literature from the Atlantic coast, chiefly from Rhode Island and Connecticut, Massachusetts and New York. The departments are well arranged and conducted, comprising original articles, editorials, which are timely and to the point, college and American medical news, foreign news, etc.

A Journal of Digestive Diseases.—The rise of a specialty in medicine is marked by the appearance of journals especially devoted to it. We are glad to inform you that the new specialty of diseases of the digestive organs is about to have its own pub-

lication, the *Archiv für Verdauungskrankheiten*, which will appear in April. It will be published in Berlin, Germany, by S. Karger. The editor is Dr. I. Boas, of Berlin, the well-known author of a work on *Diseases of the Stomach*. He will be assisted by specialists in Germany and other countries. The *Archiv* will contain original articles, besides reviews and abstracts of recent literature, and will embrace diseases of the stomach, intestine, liver, pancreas, and peritoneum, constitutional diseases, and dietetics. Those interested may communicate with the editor or the publisher.—*Julius Friedenwald, M. D., in New York Medical Journal, February* 12, 1895.

With the issue of March the *American Lancet* passes away, and its editor, Dr. Leartus Connor, who for twenty-four years has been a medical editor, retires to private life. The publishers state that "to such a degree has the *Lancet* been a creature of Dr. Connor's peculiar qualifications that it is deemed futile to seek a successor able to supply his place in the esteem of its subscribers. Hence the reluctant announcement that the present issue of the *Lancet* is its last." It is requested that the physicians of Michigan regard the *Medical Age* as the successor of the *Lancet*. "*The Lancet is dead, long live the Age!*"

The annual meeting of the American Medical Publishers' Association will be held in Baltimore on May 6th, convening in the parlors of the Eutaw House at 9:30 A. M. An interesting program is being prepared, and a successful meeting is anticipated. The officers of this Association are Landon B. Edwards, M. D., of Richmond, Va., President; J. C. Culbertson, M. D., Vice-President, of Cincinnati, O.; J. McDonald, jr., Treasurer, of New York City; Charles Wood Fassett, Secretary, of St. Joseph, Mo.

The forty-sixth annual session of the Medical Association of Georgia will be held in Savannah, April 17, 18, and 19, 1895. The officers of this Association are as follows: President, W. F. Westmoreland, Atlanta; Vice-Presidents, R. H. Taylor, Griffin; W. Tate, Tate; Secretary, D. H. Howell, Atlanta; Treasurer, E. C. Goodrich, Atlanta. An interesting program has been prepared.

More Congratulate the Quarterly.

If the Quarterly keeps up to its present form, it must take its place as one of the popular journals in the country.

R. H. CURTIS, M. D., San Francisco.

The best journal published.

J. B. SMOOT, M. D., Dallas, Texas.

I am very much pleased with the journal, and do not wish to miss one issue. J. B. BRADLEY, M. D., Eaton Rapids, Mich

You deserve much credit for your enterprise in this volume.

H. E. BEEBE, M. D., Sidney, O.

There is more practical information between its covers for the average physician than any other journal that comes to my desk. Success to the Quarterly.

S. M. WYLIE, M. D., Paxton, Ill.

I am delighted with the Quarterly; would rather give up any two of my other journals. It fills a long-felt want to the medical profession. I wish it great success.

W. S. O'NEAL, M. G., Lancaster, Ky.

I am so much pleased with the Quarterly that I would not be deprived of it for any consideration. If its present standard of excellence is maintained, it must be considered the best publication we have. I wish you the prosperity for the Quarterly it so justly merits. B. B. FOSTER, M. D., Portland, Me.

Enclosed find $2 for your Medical Quarterly. It is worth many times more than you ask for it.

R. S. STANLEY, M. D., Memphis, Tenn.

We prize your journal much.

M. S. BROWNE, M. D., Winchester, Ky.

The Quarterly has filled a long-felt want. It is a journal I can not afford to drop, and you can enter my name as a permanent subscriber. Much success to you.

J. H. GOSS, M. D., Athens, Ga.

THE FOLLOWING SPECIAL ARRANGEMENTS HAVE BEEN MADE.

MATHEWS' MEDICAL QUARTERLY and the American Practitioner and News, to one address, for one year to new subscribers, $4.00.

MATHEWS' MEDICAL QUARTERLY and The Medical Fortnightly, St. Louis, both one year, including a copy of "Funnybone," $3.00.

MATHEWS' MEDICAL QUARTERLY and the Southern Magazine, to one address, new subscribers, for one year, $2.75. Send orders to

HENRY E. TULEY, M.D., Box 434, Louisville, Ky.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to EDITORS OF MATHEWS' MEDICAL QUARTERLY, Box 434, LOUISVILLE, KY.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the QUARTERLY will be considered only with the distinct understanding that they are contributed to it exclusively.

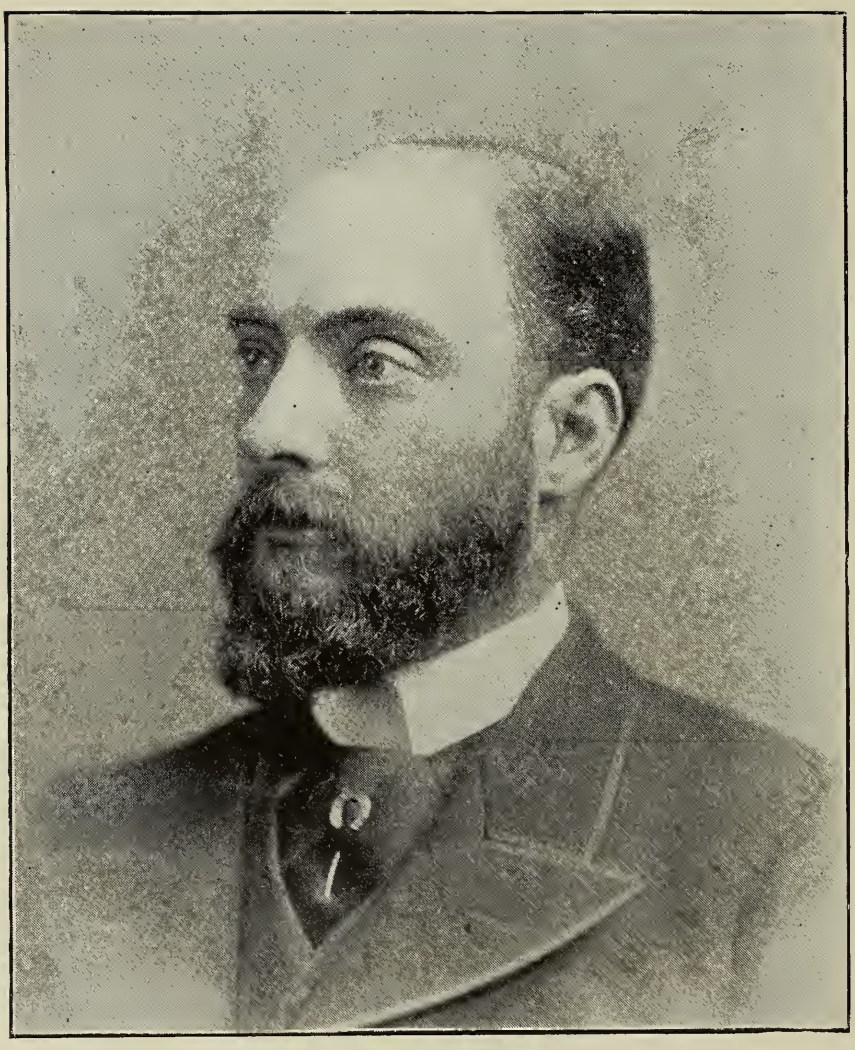
Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The editors are not responsible for the views of contributors.



HARRISON CRIPPS.

MATHEWS'
MEDICAL QUARTERLY.
"ALIS VOLAT PROPRIIS."
Vol. II. JULY, 1895. No. 3.

Original Contributions.

SOME SUGGESTIONS IN RECTAL SURGERY.*

BY J. M. MATHEWS, M. D.,
Professor of Surgery and Diseases of the Rectum, Kentucky School of Medicine.
LOUISVILLE, KY.

When the invitation came to me to read a paper before this association, I must confess that there seemed to be no time at my disposal. But, having been in attendance at the American Medical Association last week in Baltimore, I extended my trip to the East in order to be with you to-night. I have thought, in selecting a subject for the occasion, that it was the proper thing for the shoemaker to stick to his last, so I propose to take some of your valuable time in discussing:

Some Points in Rectal Surgery. Eighteen years ago I first conceived the idea, and after much hard work put it into execution, of making diseases of the rectum a specialty. At that time there was no such specialty either in this country or in Europe. Since then some one or more distinguished surgeons in every large city of the Union have adopted the specialty. This, of course, is gratifying to me. I shall reserve the right in this paper to express an individual opinion upon all subjects touched upon, and in differing from others I mean no disrespect, and do not wish to appear either dogmatic or egotistical. I shall refer in the paper only to those points that are mooted.

*Read before the Niagara University Alumni, Buffalo, N. Y., May 16, 1895. By invitation.

Hemorrhoids. Authors who have written specially on diseases of the rectum have divided hemorrhoids into two main classes: First, external, second, internal, and then have subdivided the classification into varieties of two external, and three of internal. Of the first, a tag of skin or a thrombotic tumor go to make up this class. Of the second variety, such terms as arterial, venous, and capillary are used to express them. Now, in truth, it makes very little difference with the operator whether piles are classed at all. For convenience sake it would be much better to say, with Mr. Erichsen, "all external piles should be cut off, and all internal piles tied." In my opinion the universal advice given, to let out the clot of a thrombotic pile, is non-surgical. After such an incision is made it takes the inflamed tissue which is left, just as long to disappear by reabsorption as it would have taken nature to absorb the clot. In a word, then, all external piles should be cut off. A clean even base is left, and the patient is well in one half the time when compared to the other plan.

Internal Piles. It matters very little with the operator whether internal piles are venous, arterial, or capillary in nature. To diagnosticate such would not alter the operation in the least. Again, the classification is erroneous, for the reason that no hemorrhoid is made up exclusively of arteries, veins, or capillaries. As to the method of ligating piles, I object to the plan usually named as that of Mr. Allingham, but is the one proposed by Mr. Salmon, namely, that the cut should be in the sulcus, or white line, and carried down to the base of the pile, and after ligating, that but a small portion of the pile should be cut off. If superfluous skin exists around the anus, it is much better to include it all in the incision made and by the ligature used. If such mass is transfixed and tied tightly, it should be cut off in such a manner as to leave but a small base to slough. The idea that a contraction takes place after such an operation is chimerical, and even if it did, one dilatation with the speculum would overcome it. After operating upon over two thousand patients for piles, I have never encountered contraction but in two cases, and they were relieved in the manner described. I have said that all internal piles should be tied, because my experience has taught me that compared with all other methods the ligature is the simplest of execution, freer of danger, and most radical in its results.

Fistula in Ano. This term does not in fact bear out the significance intended. Very few fistulæ in this region relate to the anus at all. Many of them communicate with the rectum, and some fistulæ in this neighborhood neither affect the anus or rectum. A buttock may be extensively invaded, the perineum destroyed, or a sinus run high up the back, when it will not be necessary to follow the time-honored injunction to push a director through the sinus into the rectum and divide all the tissues thereon, including the sphincter muscle or muscles. Indeed such a procedure would be out of the question in many of these cases. From time immemorial anal fistulæ have been divided into three varieties; namely, external, internal, and complete. Great stress is laid upon the importance of finding the internal opening of a fistula before operating. So far has this fallacy gone that I have known surgeons to refuse to operate for fistula in ano because the internal opening could not be found. This is sheer nonsense. After the main cut is made for fistula, how easy it is to trace the channel to an internal opening, if one exists. I desire to say in this connection that no idea whatever can be conveyed to the surgeon by the appearance of the external opening of a fistula. Some of the most serious cases that I have ever operated upon were those having a small, insignificant opening. Many times a whole buttock will have to be sacrificed to effect a cure in such cases. The etiology has much to do with determining the method of operating, looking to its cure or eradication.

To classify the disease simply by physical signs, such as external, internal, and complete, gives but a faint idea of its nature. Or to describe a fistula as a narrow channel, or sinus, lined with a so-called pyogenic membrane, is so far fetched as not to deserve recognition. No membrane ever secreted pus, and yet this term *pyogenic* is still used by some writers. Again, very few fistulæ are ever seen which are made up of a narrow channel or sinus. If such terms should be taken as guides in estimating the amount of disease, or mapping out an operation, not one in fifty cases would ever be cured. A far better division of fistula in ano, in my opinion, would be, namely, progressive and non-progressive. Some fistulæ can be left without an operation for an indefinite time. Others are so distinctive and destructive in their nature as to require immediate attention. Instead of mere sinuses in the

region of the rectum, well-formed cavities with a continued disposition to break down tissue will often be found. Outside of the risk of sepsis in such cases, the local destruction may be so great as to render the individual a cripple or an invalid for life. It is a well-recognized fact that abscesses around the rectum, in a heavy percentage of cases, end in fistula. Many account for this fact by the statement that the circulation here is impeded by the absence of valves in this portion of the blood circulation. But a factor of far greater importance is overlooked, namely, that the tissues being soft, fatty, and often flabby are unable to resist the inflammatory process. Besides, it must be remembered that certain diatheses, or cachexias, render these tissues peculiarly susceptible to the destructive process of inflammation. But even in healthy tissue the inroad from the inflammatory deposit is often such as to make an active and destructive condition that, unless heeded at once, ends in a serious complication of affairs. With this idea in mind, I would suggest some things which I think necessary in the successful treatment of this very troublesome affection. Speaking from a large and varied experience in surgery, I desire to say that it requires more delicate and precise operating to cure a complicated condition of fistula in ano, than any other surgical affection of which I can think. In referring to the treatment of fistula I shall have nothing to say of the use of caustics, injections, ligatures, etc., proposed by some for the cure of this affection. They are, to say the least of them, unsurgical and unsatisfactory. It is well known that there are comparatively but few cases of fistula in ano that are limited to a single tract. Indeed the most prominent thing that should be brought out in operating for this trouble, is the laying open of all communicating branches. This can only be done, of course, by the use of the knife. It is too common with the profession to think of fistula in ano as simply an opening from the true skin down to or into the bowel. The fact is that all adjacent parts to the rectum may be undermined or invaded by these fistulous channels. It can be easily understood, looking to the pathology of this affection, that no treatment can compare with the knife in dealing with it. By its use all sinuses can be divided, the bottom of fistulæ cut through, overhanging edges trimmed away, such precautions which are absolutely necessary to

a cure in such cases. The old idea that fistula in ano acted as a derivative in tubercular affections of the lungs is of course obsolete and appears in a ridiculous light to-day. Therefore the early eradication of the trouble, even in tubercular subjects, is much to be desired, and which can often be accomplished by an operation.

Ulceration of the Bowel. I am constrained to believe, from my correspondence with physicians and the knowledge gained in consultation, that the opinion prevails that ulceration of the rectum (benign) is of most frequent occurrence. I wish to go on record as saying, that it is the most infrequent of all rectal troubles. Indeed, in eighteen years of experience in this line, I have not seen one half dozen cases of ulceration of the rectum due to simple causes. This alone would force me to believe that the statement of writers that this trouble is a frequent occurrence is chimerical. Mucous membrane is very seldom the seat of ulceration, except it be of a special diathesis. So well pronounced are my views on this subject that I desire to state without argument, whenever I see a well-pronounced case of ulceration of the rectum I am at once convinced that it has its origin in one of three conditions, namely, syphilis, tuberculosis, or malignancy. As I have put myself on record, in my work on *Diseases of the Rectum*, as saying that such causes of ulceration of the rectum as dysentery, pressure of the child's head, constipation, etc., are of the rarest occurrence, I would respectfully ask that the members of this society call up any such cases in their minds and report them. So well persuaded am I that all such combined are insignificant as a cause of ulceration, that whenever I see an ulcer of a pronounced type in this portion of the gut, I know that it is of a much more serious origin than from any such causes as these. The three great factors, therefore, in my opinion, in producing ulceration of the rectum are tuberculosis, syphilis, and cancer. With either one as a cause, ulceration is a grave affair. If stricture of the rectum should result from any cause outside of these, it is easily remedied. It must be seen that such a stricture could only involve the mucous membrane, and would be annular in appearance. A simple dilatation would effect a cure. But a very different condition of affairs would result from either one or the other of the three mentioned

causes. In other words, a stricture from pressure, trauma, dysentery, etc., would be a benign or simple stricture. Whereas from the last mentioned, namely, tuberculosis, syphilis, or cancer, the stricture would be secondary to a constitutional affection. We are too apt to look for a demonstration of tuberculosis in the lungs, possibly in a joint, when from a later study of the disease it is recognized that the tubercle bacilli may have as a starting point any tissue or tissues of the body. Notably is this true of the rectum. My record book will show many cases where tuberculosis has attacked the rectum and left other tissues unaffected. In regard to syphilis as a cause of ulceration, with consequent stricture, I have before this given it as my opinion that fully *sixty per cent.* of such cases result from this cause. I only ask a careful compilation of your cases to verify this statement. In this connection I wish to give it as my opinion that stricture of the rectum resulting from syphilis is just as incurable as cancer, the only difference being that cancer kills more speedily and that the sufferer from syphilitic stricture has a longer lease on life. Strictures from cancer often exist without the manifestation of the pronounced symptoms that we usually expect. Indeed there are many cases recorded from my practice where only constipation was complained of, with some reflex pain in contiguous organs. Of course this only holds good when the growth is located above the sphincter muscle and does not involve it.

Treatment. Of course I can only suggest the manner or method of treatment of ulceration of the rectum, not having the time to enter into a full description of any plan. For a tuberculous ulceration there can be but one method to suggest. In the light of modern research it must be conceded that tubercular disease can have its origin or starting point in any tissue. The lungs may be secondary, in this trouble, to any other portion of the body. The surgeon meets with a tuberculous knee-joint, he excises it; if with tuberculous bone, he removes it, not only for its local effect, but from the knowledge that a general infection can take place from such foci. Therefore if a tuberculous ulceration of the rectum exists, it must be thoroughly curetted. I am confident that I have prevented a general infection in a number of cases by a full and complete curettement of the rectum. Of the syphilitic rectum nothing so good can be said. Whatever

may have been the opinion of pathologists a decade ago, it must be agreed to-day, if syphilis affects the rectum, it is by a secondary deposit. By a gummatous building-up process. This assumes a fibrous condition beyond the power of nature to reabsorb. We must therefore accept the ultimatum, and do the best we can. I believe that the land-marks are plain enough, and the physical signs sufficient to draw the diagnostic line between strictures from this cause and the other sources I have mentioned. I might concede that, if syphilitic ulceration of the rectum was detected in its incipiency, that constitutional medication might effect some good. But not so with the condition of which we are speaking.

When a decided stricture exists it becomes a matter for surgical interference. What shall it be? I am familiar with the fact that some writers deal with all serious ulcerations or strictures of the rectum in one of two ways surgically, total excision or colotomy. I am averse to both. If syphilis has affected the lower rectum, and results in stricture, it certainly appears advisable to divide or break the stricture and avoid the opening in the side. Especially is this true when we recognize that the process of infiltration is more or less self-limited, and we have nothing to fear in the extension of the disease except the obstruction. A free proctotomy in such cases is much better than a colotomy. If a stricture, the result of syphilis, exists in the movable or the upper rectum, I believe that it is an ideal case for a colotomy. It is a localized condition without the power of extension; nature can not reabsorb it, and obstruction results, which to all intents and purposes is purely mechanical. If it is dangerous to dilate, an opening can be made above, and the patient live indefinitely. How different from a cancerous stricture! The destructive process goes on, ends in death, regardless of the colotomy. In cancer of the rectum, or cancerous stricture, the two methods mentioned, namely, total extirpation or a colotomy, is resorted to. First, let us consider the propriety of total excision. With so many to recommend it, I feel some diffidence in entering my protest against it. Mr. Kraske has designed a most excellent operation for the removal of the rectum. But I would beg to ask, When is the operation justifiable? There are two propositions that I would submit for argument in reasoning against this operation. First, Is the patient ever cured of the trouble oper-

ated for by said operation? Second, Is the patient ever materially benefited or relieved by the operation? I beg to take the negative to both propositions. First, I take it for granted that the only cause for which it could be said that total extirpation could be advised is malignancy. I use the term synonymous with cancer. We note then the characteristic features of malignancy as follows: The disposition to grow, to ulcerate, to infiltrate, and to propagate. It is an aphorism well known in surgery in cases of cancer, to "operate early if you desire success." All teachers, too, know how assiduously they teach the student to do a thorough operation, and "cut wide of the mark" whenever dealing with this character of tumor. For instance, when removing malignant growths of the breast, how important it is, we say, to remove the glands in the axilla also. Again, how insidiously does a cancer invade the system and establish a cachexia. How difficult to tell the dividing line between a local condition and a general infection! Add to this the suspicion always that the tumor has likely propagated. These questions are difficult of solution, even when the growth is situated upon the external parts. How much more difficult, when located in an obscure part of the anatomy, as in the rectum. Cancers found here are so stealthy in their growth, and in the invasion of tissue, that oftentimes the whole rectum is blocked by the mass when only symptoms of constipation and some reflex pain are complained of. Tissues surrounding this portion of the gut are soft and easy of invasion, the blood circulation is great, the lymphatics are freely distributed. The contiguous parts are vital ones, the bladder, peritoneum, the prostate gland, and the vagina in the female are all easy of invasion. By the time that a growth in the rectum has assumed sufficient proportions to be diagnosticated as cancer, many of these parts are already invaded by the process of infiltration. To dissect and draw down the rectum in the normal state may be comparatively an easy matter, but to completely dissect out a rectum that is so pathologically changed, as in a cancerous growth, is nearly an impossibility. Besides the difficulty of accomplishing its free dissection, it is one of the bloodiest operations that I have ever attempted. Admit that it can be successfully done, what amount of good accrues to the patient? Infiltration is clearly proved by the amount of adhesion that is

witnessed. Can we now "cut wide of the mark"? I believe that every surgeon present will concur in the opinion that, to make the operation complete, all glands in the inguinal region should be removed. But what about the infiltrated tissue left in and around the rectum? Then, of what use is the operation? A bloody procedure, rectum gone and infiltrated tissue left. Would any sensible surgeon dissect out a cancer in the breast and cover the wound with infiltrated flaps? Why then should a surgeon dissect out a cancer of the rectum and leave infiltrated tissue? If a growth of the kind is situated in the lower part of the rectum, of course it can and should be excised, for we take the precaution here to "cut wide of the mark." It may be said that after excision the patient lives for several years. (?)

I shall not take your time to enter into an argument *pro* or *con* concerning colotomy for the relief of cancer of the rectum, but will make it suffice to offer a few suggestions for your consideration. It must be a well-recognized fact that in the majority of cancers of the rectum located above the sphincter muscle pain is not a factor. It must also be admitted that as a rule these patients do not suffer from obstipation to any marked degree. Why, then, do a colotomy for the relief of pain that does not exist, or for an obstruction that oftentimes does not take place? No one will contend that by doing a colotomy that cancer of the rectum is either cured or its progress materially stayed. If an obstruction does exist, and is within reach of the finger, it is much better to do a proctotomy than to open the side. It is a disgusting operation at best, promising very little, and should be avoided if possible.

SIGMOIDO-PROCTOSTOMY: AN ANASTOMOSIS OF THE LUMEN OF THE SIGMOID FLEXURE THROUGH THE LATERAL WALL OF THE RECTUM AT THE PELVIC FLOOR, WITHOUT SUTURE.*

BY HOWARD A. KELLEY, M. D.
BALTIMORE, MD.

[Read before the Johns Hopkins Medical Society.]

I was obliged, on the 20th of October, 1894, to perform a novel operation for the relief of an artificial sigmoid anus, consisting in the anastomosis of the sigmoid flexure into the lower part of the rectum on the pelvic floor, by means of traction sutures through the severed sigmoid, pulling it into a slit in the rectum, and bringing it out at the anus. By means of a pair of forceps laid across the anus grasping the sutures, the transplanted bowel was kept from retracting until a firm union had taken place between its outer surface and the edges of the incision. The entering bowel so snugly fitted the receiving bowel that no sutures were necessary to hold it in its new position. The patient recovered from the operation, and has to-day, three and one half months later, normal bowel function.

The circumstances of the case were these: One of my friends, a skillful surgeon in the South, having a poor patient who could ill afford to leave home and pay traveling expenses and hospital charges, undertook to relieve her, giving gratuitous services. Her previous history had been one of pelvic inflammatory disease accompanied with severe suffering. She was twenty-two years old, and had been married three years without pregnancy. Her menstruation had been regular until two years ago, since which time it has been coming every two to three weeks, lasting three days and accompanied by much pain.

After placing her under an anesthetic and opening the abdomen he found the pelvis choked by extensive adhesions. He began the enucleation, but it became so difficult that only the right ovary and tube were found and removed. Among the matted structures in the pelvis a narrow, rigid, tubular structure

*Johns Hopkins Hospital Bulletin.

resembling the left tube was found, extending from the brim of the pelvis down toward the pelvic floor. This was brought up and tied off. As soon as it was removed it was seen to be a section of a strictured rectum, 6 cm. long. The remaining structures were so densely matted together that their identity could not be established in spite of a persevering investigation.

The injury to the bowel could not be repaired by anastomosis on account of the wide lumen of the upper sigmoid portion, and the rigid, contracted rectal portion, which was continued in the form of a long stricture as far as the pelvic floor. He therefore concluded the operation by suturing both of the divided ends of the bowel into the lower end of the abdominal incision, the sigmoid at the extreme lower angle and the rectum just above it. The incision 5 cm. long above this was closed and the wound united, and the patient recovered with two fistulæ, the active discharging sigmoid fistula and the quiescent rectal fistula.

Through my friend's courtesy she was sent to me two months after his operation for further treatment at the Johns Hopkins Hospital. At the examination I found an opening above the symphysis pubis about 3 cm. long, at the bottom of which were two orifices, a larger one below, about 2 cm. in diameter, through which the index finger passed readily up over the left iliac fossa in the direction of the descending colon. This was manifestly the sigmoid anus. Immediately above it, separated by a narrow bridge of tissue, was a small orifice, not quite a centimeter in diameter, into which the index finger was pushed with difficulty. By continuing the examination bimanually a long tight stricture of the rectum from the abdominal wall down to a point behind the cervix uteri was detected. I think that my effort to explore the strictured bowel at this time must have ruptured its coats through into the peritoneum on the right side, for her sufferings increased from that date, with a daily rise of the temperature and quickened pulse. I found also at the operation a week later an opening through the bowel into the peritoneum walled in by extensive adhesions of the small intestines associated with a widespread colon-bacillus, acute peritonitis, proved by cultures, involving the whole lower abdomen and extending up to the left renal fossa.

I began the operation by dissecting out the entire scar containing the sigmoid and rectal orifices; these were then separated,

and each wrapped separately in gauze and laid aside. The incision was now lengthened and the enucleation of the inflamed pelvic structures begun.

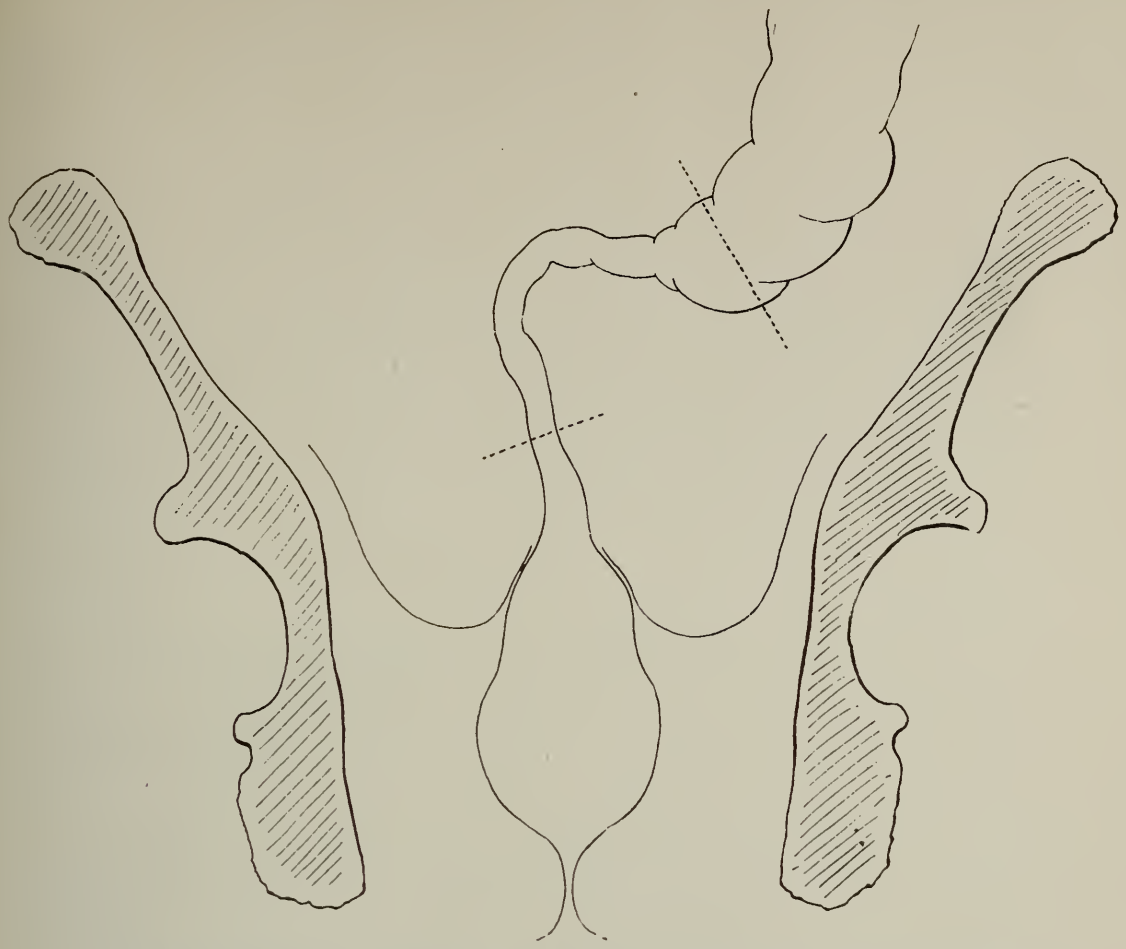
It was necessary in the first place, in order to reach the pelvic organs, to detach numerous loops of adherent coils of small intestines bound together by a fresh exudate and bleeding freely; in three places the external muscular coat was so torn as to require suturing. On completing the separation an opening was found in the strictured rectum below the promontory of the sacrum on the right about $2\frac{1}{2}$ cm. from the cut end and communicating with the peritoneal cavity.

The uterus and ovary and tube were so covered with dense fibrinous adhesions that it was impossible at first to tell where they lay, or to decide from appearances which tube and ovary had been removed in the first operation.

The uterus was finally discovered by cutting through the adhesions in the posterior part of the pelvis and letting out an encysted peritonitis of 120 cc., when the left tube was found and the position of the uterus traced by it; its enucleation was then continued by carefully following its contour and stripping up the adhesions, digging it out of a bed of densely organized lymph. The ovarian vessels were then ligated. The uterus was amputated in its cervical portion just above the vaginal junction after ligating both uterine arteries, and the stump of the cervix closed by antero-posterior silk sutures. The pelvis cleaned out in this way presented the appearance of a rough excavation, without any normal peritoneum, from the extensive stripping up of the adhesions on all sides.

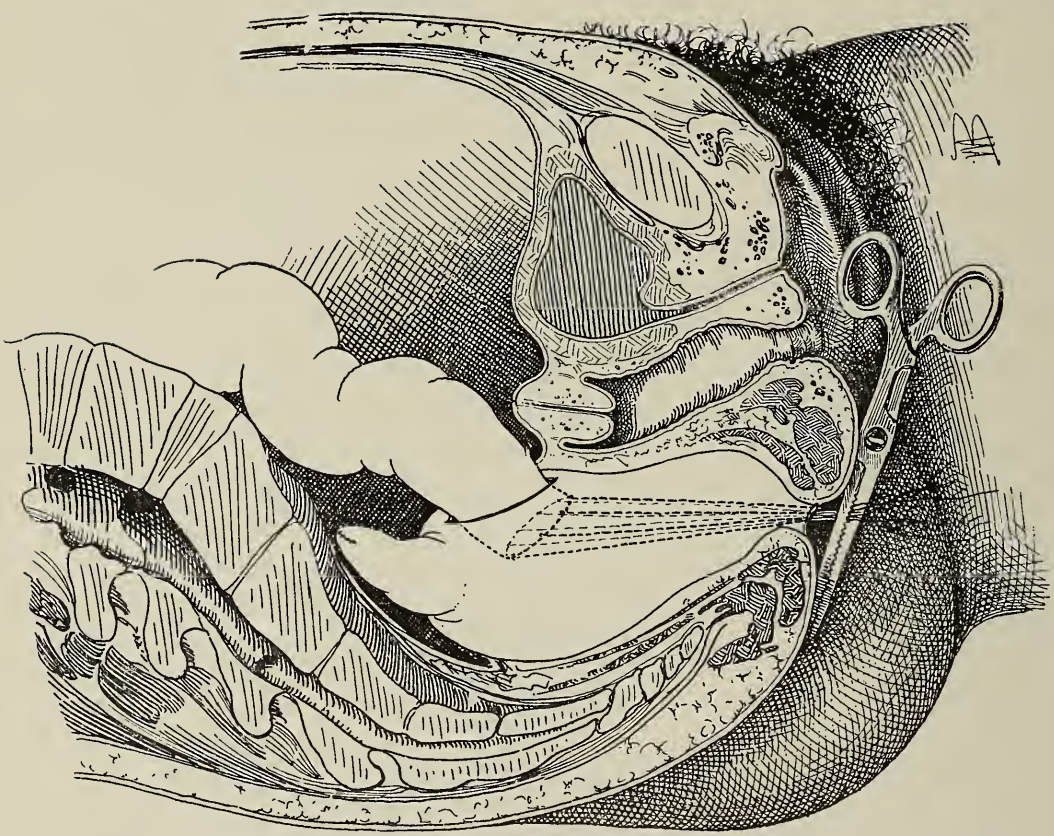
The pulse, which was 100 at the beginning of the operation, began to weaken from the first, and toward the latter part it had become so rapid as to alarm the anesthetizer, who repeatedly admonished me that the operation must be concluded quickly. Frequent hypodermics of strychnia were given without marked improvement.

The conditions at this stage in the operation were discouraging. I had before me, in the first place, a patient exhausted by an extensive peritonitis, who had just been subjected to a desperate pelvic operation, including suture of the intestines. I still had left a more formidable task in the establishment of a



1. Shows the area of strictured bowel and the portion excised between the dotted lines.

2. Shows the strictured rectum closed and the incision made in the bowel on the pelvic floor. Traction sutures have been placed in the sigmoid flexure and drawn through the rectum.



3. Sagittal section showing the sigmoid end drawn into the rectum and held in place by forceps clamping the traction sutures across the anus.

satisfactory anastomosis between the amputated sigmoid and a rectum converted into a dense tubular stricture all the way to the pelvic floor.

I overcame these difficulties and concluded the operation in five minutes in the following manner: 3 cm. of the upper part of the strictured rectum were removed, severing it below the rupture; I then approximated the wedge-shaped flaps with silk sutures, closing its lumen. This rested on the right side opposite the second sacral vertebra. The end of the sigmoid was then caught with six long silk traction sutures passed through the peritoneal and muscular coats, entering about half a centimeter from the edge of the incision, and emerging on the incision without piercing the mucosa. The walls of the bowel were from 3 to 4 mm. thick and somewhat rigid, without the flaccidity of the normal sigmoid.

I now made an oblique incision into the rectum on the pelvic floor just above and behind the vagina close to the cervix, below the lower end of the stricture. This incision was made through the abdominal incision about 3 cm. long, and directed from before backward from left to right, the greater part lying to the left. With a pair of long artery forceps passed through the anus and ampulla and out through the incision into the pelvic cavity, the six traction sutures were caught in a bunch and pulled down and out of the anus, drawing the sigmoid into the rectal incision, which was held open with forceps to facilitate the entrance. The bowel was kept from slipping back into the pelvis by grasping the traction sutures in the heel of the bite of the forceps lying across the anus in the gluteal furrow. A rectal examination showed that about 1 cm. of the sigmoid projected into the rectum. The fit of bowel into bowel at the incision, as seen from above, was such a snug one that the line of division between sigmoid and rectum could not be detected.

It was my intention to fix the anastomosis by means of a few sutures uniting the sigmoid to the rectum, passed on the pelvic side, but I found that this could not be carried out, as there was so little room between the bowel and the pelvic walls that I could not use either needle-holder or needle.

The pelvis was washed out and a gauze pack inserted around the sigmoid and another up among the inflamed bowel and brought

out at the lower angle of incision, which was closed to this point. She made an excellent recovery, and has since had normal bowel function. Since removing the pack there has been a constantly decreasing purulent discharge from the lower angle of the wound. At no time has she passed fecal matter in any other way than *per anum*.

A CONCISE REPORT OF SOME INTERESTING RECTAL CASES.

BY LEON STRAUS, M. D.,
ST. LOUIS, MO.

[Written for MATHEWS' MEDICAL QUARTERLY.]

CASE 1. Mr. T., aged thirty-six years, family history good; some months ago he had grippe and was quite ill for some days. The attending physician diagnosed the disease as inflammation of the bowels, as the result of grippe, but as the trouble did not subside as promptly as was expected the diagnosis was changed and the disease called malarial fever. Patient complained of a burning pain along the tract of the transverse and descending colon, extending to the sigmoid flexure and rectum as well. He complained of diarrhea, passing large quantities of stringy, muco-pus, together with a white substance which proved to be mucous membrane.

This patient doubtless had grippe and the bowel trouble was one of its protean sequels, a chronic hypertrophic desquamative procto-colitis. This form of the disease is unique, and the mucous membrane has the characteristic cauliflower appearance. Scraping with a dull curette causes a micro-purulent fluid to exude. Dr. Tuttle concludes that cauliflower follicles and the hypersecretion is thus accounted for.

There has been no opportunity to make a *post-mortem* upon one of the cases, and for that reason it will be impossible to give a microscropic report upon its pathology. I will content myself by describing simply what the naked eye sees.

There rarely is any contraction following this desquamative process. The causes of this form of proctitis are not clearly defined. It usually occurs in cases where there are decided tubercular tendencies.

Dr. Tuttle thinks it has its origin in an irritation of the Lieberkuhn follicles with consequent acrid secretion and persistent hypertrophy of same. Treatment in this case consisted in dieting, in a measure, but not on absolute liquid diet as is so often advocated, but a well-selected semi-solid diet. The most vigorous constructive treatment should be followed. The chief reliance after all is a careful local treatment which can only be made by means of a Wales rectal bougie, which is carried up to and beyond the sigmoid flexure into the descending colon. I have gotten good results from various astringents. I prefer hydrastis for the most part, but it is well to ring the changes. The patience of both physician and patient will be tried to the utmost in these cases, because of the tediousness of the disease. All the cases I have seen have recovered.

Case 2. Mr. C., aged forty years; family history good. Some months ago had bladder trouble for which he was treated by competent specialists; his trouble improved slowly; finally all traces of pus in the urine disappeared, and all other evidence, so far as the examination of the urine was concerned. Still the symptom of micturition persisted for weeks after all other symptoms disappeared.

Patient was treated for deep urethral disease, but the result was not satisfactory at all. He complained of a heavy feeling in the rectum from which he was never quite free. Dr. Burnett, believing there was rectal trouble, kindly referred him to me for an examination and opinion. Patient was placed on table and a careful digital examination revealed ulceration, both posteriorly and anteriorly, just in the domain of the internal sphincter. This was a clear case of organic lesion of the rectum with a typical bladder and urethral reflex. The bladder and urethral disease had been most skillfully and successfully treated and really cured. The reflex condition was intensified, because of an hypertrophic condition of the sphincters, the result of continuous irritation kept up by the ulceration.

Patient was anesthetized, sphincters thoroughly divulsed, after which a thorough curettement was made. From the day of the operation there has been no return of the symptom of micturition.

He can retain his urine the usual length of time without the least pain. The rectum is free from pain or heaviness, in fact, a

perfectly well and happy man. This case teaches its own lesson as many others do. This was in every way typical, and for that reason was reported.

Case 3. Miss T., aged thirty-six; family history good; patient was very vigorous up to last fall, or six months ago, when she had a protracted typhoid fever from which she convalesced quite slowly.

The bowels gave her more or less trouble from the beginning, as there was some diarrhea. The symptom persisted for some weeks after the fever had subsided. The actions became more frequent both by day and night as well. These actions were not accompanied by any pain; they were made up largely of mucus with a slight showing of blood. Later on the amount of blood was very considerable.

The patient complained of heaviness or weight in the lumbar region. When I saw the patient she was nervous, had insomnia, and had lost thirty pounds of flesh. She had been restricted to an absolute milk diet, but to no purpose. The patient was placed on the table. After painstaking examination the trouble was located at the sigmoid flexure. This is an interesting case for the reason that it is beyond doubt a sequel of typhoid fever. I venture the opinion that ulceration of the sigmoid flexure is a much more frequent sequel of typhoid fever than has been heretofore dreamed of. This case was treated locally by means of Wales' bougie. I have said, and repeat it, that the only possible way of treating these cases successfully is by applying the medicine directly to the parts by means of the Wales bougie. To use the bougie in these cases requires some skill, which comes only by experience. I have seen cases that did not get on, but it was not the fault of the method but of the operator. The treatment in this case was local, with general constructive treatment. Various medicines were used from time to time, fluid hydrastis, balsam of peru, pinus canadensis. After six weeks of treatment was discharged. Bowels regular, no hemorrhage; patient eats well and sleeps well. I did not restrict this patient's diet, for the reason in cases of sigmoid ulceration it is not indicated but really hurtful.

Case 4. Mr. C., aged twenty-four; family history good; four years ago had grippe and was quite ill for some weeks. After get-

ting up patient complained of a burning pain along the tract of the transverse and descending colon, extending to the sigmoid flexure. One of the most annoying symptoms is obstipation. This patient passes quantities of muco-pus, but, unlike Case 3, there is no white substance or mucous membrane, Case 3 being the desquamative form of ulceration, which is never followed by contraction. Case 2 is of the non-desquamative form, and in this case was followed by some contraction which accounts for the obstipation, and also explains why the liquid diet and rest treatment not only failed to improve the patient but was absolutely hurtful, inasmuch as the long fast from solids results in loss of flesh and lowering of the vitality of the nerve centers.

This case furnishes another, and so far as I know, unique sequel of grippe in the form of ulceration of the sigmoid flexure, followed by contraction resulting in stricture of large caliber. This patient is now under treatment, and it remains to be seen how far he will be improved. I have reached the conclusion, both from observation and experience, that the routine way of restricting the diet of these patients to liquids, and especially to milk, is not good treatment, but on the other hand really injurious. The patient should have a full diet of the most nutritious sort, and should take enough exercise to assist digestion and produce refreshing sleep. Depend on local treatment to get the ulceration well.

Case 5. J. H., aged thirty-three years; three years ago contracted syphilis; was treated, but without system, that is, off and on for some months; he observes that for the last six months he has constipation and diarrhea alternately, and latterly he never has a well-formed action, and found it impossible to have a full action, consequently he had to go often to stool. He did not procure treatment, hoping he would get along without it; he allowed himself to become somewhat constipated, and for that reason his bowels had not acted at all for some days. He had an urgent desire to go to stool, and strained more than was usual; it forced a large fecal mass into the rectum and pain was intense, and he forced it out, tearing its way through the strictured part. He felt something give, but did not know that he had torn himself; he walked from the water-closet to the dining-room and fainted; was helped to his room. I was called to see him, and had his

clothes removed and examined him, and found that he had passed an immense amount of clotted blood, in fact he had had an internal hemorrhage, and the profuseness of the hemorrhage made tamponing imperative and immediate. The tampon was removed on the second day to allow his bowels to move, as he had a constant desire to go to stool; he had two movements, after which he complained of feeling faint; he started to his room but fell on the way, when he again passed an immense amount of clotted blood.

I found him in a condition of collapse; he was cold and could not speak above a whisper and was pulseless at the wrist. This was a terrific recurrent hemorrhage which well-nigh proved fatal, but for the speedy and perfect tamponing certainly would have terminated fatally. This case is unique and interesting, for it was an accidental hemorrhage. In the way of literature on this subject I do not remember to have read of another like case. The tampon was removed on the fifth day, after which the patient made good recovery.

409 North Grand Avenue.

RECTAL EXCISION BY THE KRASKE METHOD: REPORT OF A CASE.

BY CHARLES C. ALLISON, M. D.,
Professor of Rectal and Genito-Urinary Surgery at the Omaha Medical College, etc.
OMAHA, NEB.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Extirpation of the rectum by the sacral method promises satisfactory results in selected cases. The limitations of the operation are, I think, well defined, yet for the removal of large, deep-seated pelvic tumors the Kraske incision affords more room and more thoroughly conserves blood-vessels and nerves than any method yet devised.

Reported cases up to date show a mortality after the operation for cancer of thirty (30) per cent., with recurrences in forty (40) per cent. of recoveries. This includes, however, many inoperable cases, as proven by a mortality of eight (8) per cent. in the hands of some surgeons in properly selected cases.

The following clinical history and appended operative technique bears upon this subject: Mr. F. H., age twenty-eight, single, farmer, gives a good personal and family history. No hereditary tendencies or evidences of vicious habits are found. The patient reports uninterrupted good health, with the exception of an attack of *la grippe*, three years ago, which was without bowel complications.

A history of slight distress in the rectum during the last two years, with frequent mucous, blood-stained discharges, was followed by a copious hemorrhage from the bowel, April 15, 1895.

The patient was examined April 20, 1895, and a well-defined, indurated, excavated growth was found on the left and anterior aspects of the rectum. The growth began an inch above the internal sphincter, and extended up into the rectum a distance of three inches. The index finger could reach the upper margin—the examination being made easier by the flabby, relaxed muscles of the perineum and abdomen. The crateriform base of the ulcer was friable and bled easily.

Sacral incision was advised, and April 24th, after complete evacuation of the bowel and irrigation of the colon, the upper part of the rectum was packed with gauze and a median incision made from the sacral vertebra to the tip of the coccyx.

After removal of the coccyx, the left side of the sacrum was freed from its muscular and ligamentous attachments and the rectum exposed. The peri-rectal tissue was dissected away with the finger, until the upper part of the rectum was reached, and a zone of healthy bowel an inch wide was included in the excised portion of the gut.

The tumor mass was then freed to the internal sphincter, and its removal followed by severing the attachments of the proximal end of the rectum. This was accomplished without injury to the main branches of the superior hemorrhoidal artery, after which the free end of the rectum was brought through the sphincters, which had been denuded after the manner of Whitehead's operation for hemorrhoids, and stitched with silk to the mucocutaneous anal orifice.

Hemorrhage was not profuse, and although the peritoneal cavity was freely opened, it was carefully guarded against sepsis, and immediately closed. The pre-sacral space was packed with

gauze, the sacral incision closed with strong silk sutures, and a snug dressing applied.

A quick pulse for twelve hours was the only noteworthy symptom during convalescence. A small perforation at the posterior distal end of the new rectum closed in two weeks, and the integrity of the sphincters is perfect. Continence of the bowel is at this date but slightly impaired. The leading points in the operation I think are:

First: Asepsis, which, if perfect for three days, or until the first dressing is removed, secures septic immunity on account of the development of the barrier which granulation tissue affords.

Second: The preservation of the blood supply given by the superior hemorrhoidal artery (Kamerer), which can be accomplished when the upper half of the first part of the rectum is not invaded.

Third: The protection of the sphincters when they are known to be free from malignant invasion, otherwise establish an artificial anus at the side of the sacrum.

Fourth: The use of the Murphy button or end-to-end anastomosis may be useful; but that either plan is of general use I am not convinced.

FIRST YEAR'S WORK IN RECTAL SURGERY AT ST. ELIZABETH HOSPITAL.

BY G. B. EVANS, M. D.,
Rectal Surgeon to St. Elizabeth Hospital.
DAYTON, OHIO.

At the end of this, the first year's work in rectal surgery in the hospital, I felt it might be profitable to review the history of some of the most interesting cases, the method of treatment adopted, and results obtained.

The total number of rectal cases treated during the year 1894, was 47: Abscess perirectal, with fistula, 4; abscess proper, 1; epithelioma of rectum, 1; fistula in ano, multiple, 9; fissure of anus, 8; fissure with impaction, 1; hemorrhoids, 13; obstruction, 4; osteo-sarcoma of sacrum obstructing rectum, 1; prolapsus recti, 1; rectal impaction, 2; stricture of rectum, specific, 1; tubercular ulceration of rectum, 1.

In all cases where there is any disease of the rectum the sphincters should be thoroughly divulsed. To do this properly it should require at least five minutes, and should be done carefully and gently, endeavoring not to injure the mucous membrane. In the first series of cases, rectal abscess, we are accustomed to make a free incision into the cavity of the abscess and break down all partition walls; the cavity is then curetted with a sharp curette and packed, not too tight, with iodoform gauze, to be removed every second or third day, and cavity washed out with bichloride solution, 1–3,000, and repacked. A compress of cotton and gauze is applied and held in place by a T-bandage. If this is done as directed, we will seldom have a fistula as a sequel.

In the next series occurred this interesting case: Mr. F., age fifty-seven, farmer by occupation. Pale, anemic, and had been suffering the past year with diarrhea, pain in the rectum, passing blood and pus four or five times in twenty-four hours. He was admitted to the house August 1, 1894, with the above history.

On examination we found an epithelioma just above the sphincters on the anterior wall. His circulation was bad. An excision was out of the question on account of his heart's action and his general anemic condition. A colotomy he flatly refused, consequently we ordered a palliative treatment with absolute cleanliness, and let nature take her course. He was discharged December 19, 1894, as improved.

The next series of cases were very interesting, viz., fistula in ano. Some one has said that it requires the greatest amount of surgical skill to properly and successfully treat this class of disease of the rectum, and I am sure we can agree with the author of this statement. At present it is a debatable question what method to pursue; shall these fistulæ be treated openly, or shall they individually be divided and sutured?

The different tracts should be found out and thoroughly curetted, leaving not a single trace of the pyogenic membrane. In a few of my patients I endeavored to suture the different tracts with buried catgut, where the wound was deep, and then close the external wound with silk-worm gut, but the results were not very satisfactory. I also sutured the superficial fistulæ with silk-worm gut with like results.

This technique was therefore abandoned, and we now pack the canals carefully with iodoform gauze every third or fourth day and allow them to heal by granulation. Our efforts have in every case been crowned with success. In connection with this series I desire to relate the history and treatment of one case: Mr. C., age forty-five, laborer, was admitted June 1, 1894, very anemic. Had been afflicted for the past four years, and had all this time been under some surgeon's treatment. Preparation was at once begun for the operation by giving saline cathartics and injections of bichloride, 1–2,000. Operation June 4th; Dr. Reeve, sr., giving the anesthetic, and Dr. F. C. Weaver assisting. Fifteen fistulæ were found, cut, and thoroughly curetted. The deep ones were brought together with buried catgut, and the external wound closed with silk-worm gut. Our patient positively denied ever having had syphilis, nor was there any history of tuberculosis in his family. The weather was extremely warm, and the dressing had to be changed every day, and sometimes twice a day, on account of his profuse sweating. He was given tonics and good, nourishing diet. Believing the disease to be specific in character, he was given the iodides and mercury in liberal doses. Three of the tracts failed to heal, and, yielding to his wishes, he was discharged improved July 23d, with the understanding that he was to return for a second operation soon as the cool weather set in. He was readmitted September 22d, very much improved in health. The above treatment was continued during his absence from the hospital. The second operation was made September 26th, taking the same care in preparation as in the first operation. This time the tracts were treated openly and packed with iodoform gauze every third day. He did nicely, gaining in flesh each day, and December 1st was set for his discharge; he had been about the house for a week making himself useful.

On the 28th of November he called my attention to a small pimple from which on pressure quite a quantity of pus escaped. I passed a probe and found that there was a large cavity, and my patient was far from being cured. My disappointment was almost as great his. On December 5th he was again put on the table and the wound opened, Dr. Pettett giving the anesthetic and Dr. Jewett assisting. This time we discovered that the coccyx and two rings of the sacrum were diseased. These were removed,

and the various tracts slit up and the whole wound thoroughly curetted and packed.

His recovery was slow but sure, and he was discharged cured March 4, 1895. Up to date he has been earning a livelihood. How many times the sphincters were cut I am unable to say, but it was more than four times, and what is most surprising he has absolute control over his passages, and his linen is never soiled. This has been a very interesting and instructive case, and goes to show that in the end, however discouraging it may be, to persevere with these trying and perplexing cases just as long as your patient will permit you. This case has taught me this fact, that multiple fistulæ can be cured. We had two other cases equally as trying, and they made good recoveries, but, as in the first, it took patience, work, and perseverance.

The cases of fissure were treated by thorough divulsion, longitudinal division of the superficial fibers of sphincters and curettement; and where the diseased tissue was extensive and deep a drainage-tube wrapped with iodoform gauze was placed in the rectum, compress of cotton held by a T-bandage. This dressing was not disturbed for sixty hours, when it was removed and the rectum irrigated with a solution of bichloride, 1–3,000. The cases made a rapid recovery.

There were thirteen cases of hemorrhoids, all of which, except two, were removed by clamp and cautery. In these two cases we used the ligature, not from choice, but because the Paquelin cautery failed to work satisfactorily. The patients did well, but suffered more pain and were in the house longer than those where the clamp and cautery was used. I prefer the clamp and cautery for the following reasons: The operation is more quickly done; the patient suffers less, is confined to bed a shorter time, and this is of great importance in the majority of our cases; there is not so much danger of sepsis as from either the ligature or the Whitehead operation. The latter operation I have never done, and think I never shall.

The history of one of the most interesting cases, where I did an inguinal colotomy for obstruction of the rectum due to what was supposed to be an osteo-sarcoma attached to the anterior wall of the sacrum and coccyx, was as follows: Mr. H., age sixty-one, admitted to the hospital with what was supposed to be an osteo-

sarcoma on the anterior wall of sacrum and coccyx. He was very much emaciated. Digestive organs very much impaired, due no doubt to the large amount of opium he had been obliged to take to relieve pain and procure sleep. He was unable to walk without the use of two canes, and then only in a stooped position. Was unable to sit except on the edge of a chair or bench. Consultation was held with members of the house staff. His heart was in any thing but a favorable condition for the anesthetic, but as he begged for relief we agreed to do a colotomy, as it was impossible to remove the growth. Previous to the operation he was taking four ounces of tr. opii in twenty-four hours. Dr. Reese, sr., gave the anesthetic and Dr. Litchter assisted. The colotomy was made in the left inguinal region. The colon was easily found and supported by silver wire and clamped with buttons on either side of the incision. The wound was dressed with rubber tissue and a compress of bichloride gauze and cotton, held snugly in place by a flannel bandage.

The patient rallied nicely from the ether, the bowel was opened on the fifth day, and his convalescence was uneventful. After the first stool the opium was gradually taken away from him. He left the hospital October 31st feeling very well. He tells me he has not taken a particle of opium since his discharge, has gained fifteen pounds in flesh, works hard every day, eats and sleeps well, and has good control over his anus in his groin.

The case of prolapsus was in a child, age five years, which was treated in the same manner as you would do a clamp and cautery for internal hemorrhoids.

The case of specific stricture of the rectum was any thing but favorable for operation. The history was as follows: Miss K., age thirty-seven, contracted syphilis about five years ago, and for the past four years has had more or less trouble with constipation and considerable discharge of pus and blood. Gradual and forced dilatation has been practiced upon her by different surgeons hoping to give her relief. I advised an excision or colotomy, but she declined both. A linear proctotomy was the only relief I could offer, and to this she consented. The operation was made September 10th, two days after her admission to the hospital. A large drainage-tube wrapped with iodoform gauze was introduced after an incision had been made from the upper end

of the stricture to the coccyx and the ulcerated tissue had been curretted. The tube was left in four days, the rectum washed out, and a fresh tube introduced. On the eighth day this was removed and the bowels moved. Afterward, each day, a No. 9 Wayle's bougie was introduced and the bowels washed out with bichloride solution, 1–2,000. Several times during the first week her life was despaired of. After the eighth day she made a rapid recovery, was given liberal doses of iron and the iodides. She was discharged improved November 12, 1894. Since leaving the hospital she has neglected using the bougie and taking the iodides, and consequently the rectum has closed almost as tightly as before. This is certainly discouraging, but what we may expect when we have no control over our patients. I saw her in April, and her general appearance had improved so much that I did not recognize her, but the stricture, she said, was just as tight. Under such circumstances I would advise an excision or colotomy, as I would rather let my patient go to some other surgeon than to do a linear proctotomy. It gives only short relief, and then the patient is sure to blame you for not making a cure.

RECTAL REFLEXES: A CASE IN POINT.

BY A. B. COOKE, A. M., M. D.,
Lecturer on Diseases of the Rectum, University of Nashville.
NASHVILLE, TENN.

[Written for MATHEWS' MEDICAL QUARTERLY.]

In the special study which I have given to diseases of the rectum I have found no subject more interesting and none which impressed me as more important than rectal reflexes. To one who has an investigating turn of mind no field within the whole domain of medicine is so inviting and at the same time so rich in promise as that of the reflexes in general. But the difficulties which invest the subject are of such a nature as to dampen the ardor of the most enthusiastic and try the patience of the most indefatigable.

In spite of the achievements of modern research the great sympathetic nervous system is still more or less enshrouded in

mystery; and until other and more accurate methods of investigation are instituted, its intricacies of function and utility must remain fruitful themes for scientific speculation and "contributions" to medical literature. When we say that the sympathetic system consists of a double series of ganglia situated upon either side of the vertebral column, extending from the base of the cranium above to the coccyx below, connecting by numerous nerve fibers with each other and with the nerves of the cerebro-spinal system, and distributing other nerve fibers in the form of complicated plexuses to the various viscera and to the muscular coats of the blood-vessels, the substance of our accurate knowledge is briefly conveyed. How it acts, whence it receives its force, and wherein and to what extent its force differs from that of the cerebro-spinal system so that one transmits involuntary nerve energy and the other voluntary, we can only conjecture. The revelations of the microscope in reality reveal nothing, for histologically the cell substance and axis-cylinders of ganglia and branches differ in no appreciable respect from the corresponding elements of the brain and spinal cord and their nerve fibers.

Yet, though our knowledge as to the nature and methods of its action is of necessity so limited, we know that the vital organs and functions are controlled by the sympathetic through its system of reflexes, and that by an all-wise provision we live on independent of volition, and serenely, perhaps fortunately, indifferent to the great problems of How and Why. To the question propounded two thousand years ago, "Can a man by taking thought add one cubit to his stature?" we must still make simple negative answer, and with that answer be content.

But the manifestations of vital functions are open to our scrutiny, and while we may not be able to explain their laws, we may profit by studying their phenomena and endeavoring as best we can to comprehend their nature and significance.

By closely observing and classifying the phenomena which attend scientific experiments, certain logical inferences may be drawn. In reference to the sympathetic nervous system the inference which concerns us for present purposes is that its various ganglia constitute the chief centers of reflex nerve action. The route of such action is always devious and its effects more or less obscure and ill-defined. For instance, a peripheral sensa-

tion or irritation is first received by brain or spinal cord, transferred thence to the corresponding sympathetic center, and results in the speedy exhibition of some involuntary phenomena. To this class of reflexes belong sudden flushing and blanching of the face, accelerated heart action, increased secretion of perspiration, and unconquerable desire to micturate or go to stool in the presence of unlooked for joy, sorrow or other sudden emotion. Other illustrations are headache from eye-strain, the deflected pains in head of penis, hip, and knee from vesical calculus, the gastric crises of tabes dorsalis, and the convulsions of childhood which arise from adherent prepuce and worms or other sources of irritation in the intestinal tract.

Going a step further for illustration, we may say, that while in the light of our present knowledge it can not be accepted as proven, the theory that idiopathic epilepsy is merely the periodic explosion of accumulated nerve force stored up in the reflex centers from more or less constant foci of peripheral irritation has much to commend and support it.

The class of reflexes, however, to which this article has special reference are those which originate in the rectum, and without further introduction let us proceed to their consideration.

A brief review of the anatomy of the rectum with special reference to its nerve supply will facilitate our understanding of the subject. By means of the branches which accompany the various blood-vessels and the several plexuses from which they spring, the rectum is supplied with remarkable profuseness by the sympathetic system. It is also supplied directly from the cerebro-spinal system through the fourth sacral nerve, and the sphincter ani and its contiguous integument receive additional filaments from the pudic, a branch of the the sacral plexus. The rectum is unique in that it is the only portion of the intestinal canal which is supplied by a spinal nerve.

Recalling that as regards both function and distribution the plexuses of the sympathetic system are inextricably intermingled, and remembering that the filaments of the fourth sacral and pudic nerves are distributed to the pelvic viscera and to the adjacent structures of the perineum, as well as to the rectum and its sphincters, it would seem that this organ were fashioned mainly to be the parent of reflexes. And especially does it so appear

when the other peculiarities of its anatomy which go to make it the most frequent seat of disease in the entire body are considered.

The periodic congestion to which the rectum is subjected may almost be regarded a physiological source of irritation, and the practically universal condition of constipation, temporary or habitual, with its resultant distension and pressure of hardened feces, is sufficient explanation of the frequency with which this irritation may be traced to pathological causes. And even though in many cases the lesion may be undiscoverable, I believe, with Mathews, that every reflex has its source in a pathological condition somewhere.

The sphincter ani is the most perfect type of sphincters, and, in keeping with its great importance from the standpoint of function, it is more richly provided with nerves than any of its class or in fact than any other muscle in the body. As before described, this nerve supply is from two sources, the sympathetic and the cerebro-spinal, and this seems to be the chief and most noteworthy point of peripheral communication between these systems.

When at rest the sphincter ani is in a state of tonic contraction, and is conspicuous among muscles as being the only one which requires the constant expenditure of nerve force to maintain it in a normal inactive condition.

These facts are significant when we come to consider rectal reflexes.

As Mathews tersely expresses it, "To have a reflex act there are three things necessary: (1) An afferent nerve fiber; (2) a transferring center; (3) an efferent nerve fiber forming a reflex arc." To these I would add a fourth, namely, *a focus of irritation.* These requisites are furnished in almost ideal form by the rectum and anus, and the fact is notable that the reflexes which arise from this locality are the most numerous, the most varied, and the most powerful of which we have any knowledge.

The pain which arises from even trivial lesions, especially those so situated as to produce and be complicated by irritable sphincter, is out of all proportion to the extent of the disease, and in many cases constitutes the most acute suffering to which humanity is susceptible. Keeping always in mind the nervous

supply of the parts, it is scarcely remarkable that in chronic or neglected cases the gravest systemic derangement should often result. In addition to the more pronounced reflexes which are so frequently found localized in some portion of the genito-urinary system, there are others which are evident only in their effects. To this class belong torpid liver, gastric and intestinal indigestion, constant headache, nervousness, loss of memory, lassitude, insomnia, melancholia, emaciation, etc., an array of ills which can be ascribed to no other single origin. And to this list, for the present at least, we are justified in adding epilepsy, for while, as before intimated, this disease can not be *proven* to be a reflex manifestation, the results which have followed rectal operations in well-authenticated cases are such as to point significantly in that direction and render the inference unavoidable.

Just a word as to the treatment of these reflexes. Remove the cause, and the reflexes will remove themselves. A careful search, remembering that no lesion, however insignificant, is to be regarded unimportant, will enable us to accomplish results which oftentimes seem little less than magical.

Reflexes are not always pathological evils. On the other hand, in certain instances to which I shall presently call attention, they are invaluable additions to our therapeutic resources, even serving in many cases to place the issue of life and death directly in the hands of the physician. The intimate connection which is maintained between the vital centers and the lower portion of the rectum and its sphincters, through their extensive nerve supply, is demonstrated at every operation upon these parts. All who have had experience in rectal surgery will recall, that however profound the anesthesia, divulsion, unless accomplished with extreme caution and deliberation, invariably produces stertorous respiration, profound modification of heart action, immediate congestion of the cutaneous capillaries, and muscular contraction and rigidity sometimes amounting to opisthotonos.

These phenomena are significant, and I shall briefly mention a few of the valuable applications which may be made of the reflexes which produce them.

In the *American Medico-Surgical Bulletin*, issue of February 1, 1895, I had the honor to present to the profession a communication entitled "A New Method of Resuscitating the Still-born,"

in which rectal dilatation was the method advocated. The only conditions of its application are that the child must be normal in every essential respect and the method employed during the period of viability. Since the article appeared I have been advised of a number of cases in which the method was adopted with complete success, and the stage of experiment may now be said to be past.

Another field of application for this procedure which has stood the test of time and trial is its use in the accidents of anesthesia. If divulsion of the sphincter fails to set the wheels of life in motion again, other means of resuscitation constitute merely a forlorn hope.

Opium and other narcotic poisoning, asphyxiation from the inhalation of coal gas, drowning, etc., and cases of catalepsy, "suspended animation," etc., where for obvious reasons the question of life or death must be definitely settled, offer other favorable occasions for the useful exhibition of this same procedure.

Until very recently the subject of reflexes has received nothing like systematic investigation and study, and the prediction that we are merely upon the threshold of discoveries to which the above will form but an imperfect introduction, is more than idle dreaming. But the benefits which have already resulted are great. The crises in which rectal reflexes have proven themselves effective and the light and hope which they have incidentally cast upon epilepsy, a heretofore all but hopeless disease, are sufficient to call for grateful recognition and inspire a more systematic and exhaustive investigation of the entire subject.

Case: In November, 1894, George M., twenty-five years of age, came into the hands of my associate, Dr. Grinstead, and myself, complaining of "piles." Upon examination a large mass of protruding hemorrhoids in a state of acute inflammation was discovered and operation advised and accepted. After thorough preparation the operation was performed November 9th, the Allingham or ligature method being employed. The only feature of special note which marked the operation was the occurrence of what seemed to be a fleeting but typical convulsion upon divulsion of the sphincter. This led us to question the patient and his family. No history of consumption, epilepsy or other hereditary disease was elicited, but we learned that the patient had been

subject to "nervous spells" since the age of fourteen, and that he was at that time under the treatment of another physician for this trouble. From the description of the attacks and from the very competent physician who had been treating the case we gathered that the "spells" were unmistakably epilepsy. At first the attacks had occurred at irregular intervals of a year or more, and gradually increased in frequency until, at the time of operation, he was having one every two or three weeks. We further learned that for the past six or eight years he had been aware of some rectal trouble, so that the development of the epilepsy and the local disease were closely enough associated to be suggestive of cause and effect relation.

Several incidents of the convalescence were worthy of record, viz., the excessive amount and duration of pain following the operation, and the occurrence of, apparently, an acute attack of mania upon moving the bowels on the fifth day. The latter was present in greater or less degree for about twelve hours and was characterized by active delirium and periods of great excitement, accompanied by bursts of laughing, crying, swearing, etc.

With these exceptions convalescence was uneventful, and the result obtained perfect. It is now just eight months since the operation, during which time *the patient has not had a single "nervous spell" nor a trace of one*, and expresses himself as feeling better in every way than at any time since he can remember.

Gastro-Intestinal Disease.

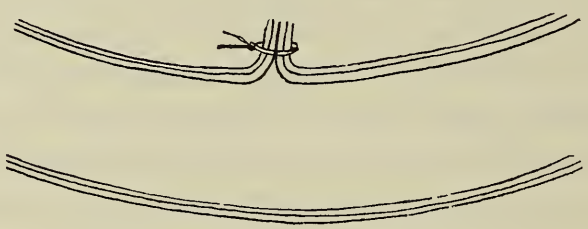
APPENDIX STUMP.

BY C. E. RUTH, M. D.,
Professor of Anatomy in Keokuk Medical College; Clinical Surgeon to St. Joseph's Hospital.
KEOKUK, IOWA.

[Written for MATHEWS' MEDICAL QUARTERLY.]

If the methods employed by almost all surgeons in dealing with wounds of the stomach and intestines in general are correct, then the methods employed in closing the stump of the appendix are radically wrong. No surgeon would think of grasping the edges of a wound in any of the hollow viscera, drawing them up, everting the edges of the wound, and ligating *en masse*, as per Cut 1:

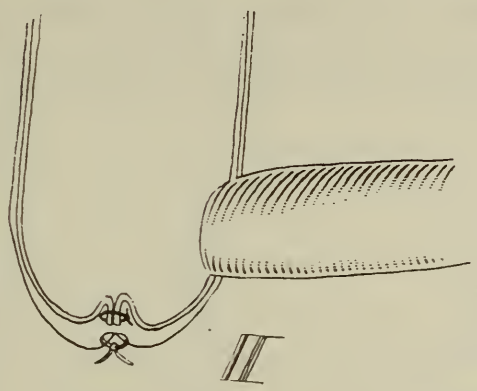
I



Yet that very plan has its exact counterpart in the rough and ready method adopted by many surgeons in dealing with the appendix, and occasionally no attempt is made to drain. Some, however, do drain, and tell us that there was a sinus which discharged for a time but finally closed. Again, recovery was reported prompt and uneventful, but a secondary abscess formed and had to be opened. It possibly discharged feces, but closed after some months to, crater like, explode again.

Every one of these men will tell you that the mucous membrane should be inverted, as a strong union can not be hoped for between mucous membranes; besides, its septic condition makes its eversion dangerous. The next most careful surgeon does the same as his predecessor, save that he separates a cuff of peritoneum, partly devitalizing it thereby, ligates the stump as in cut,

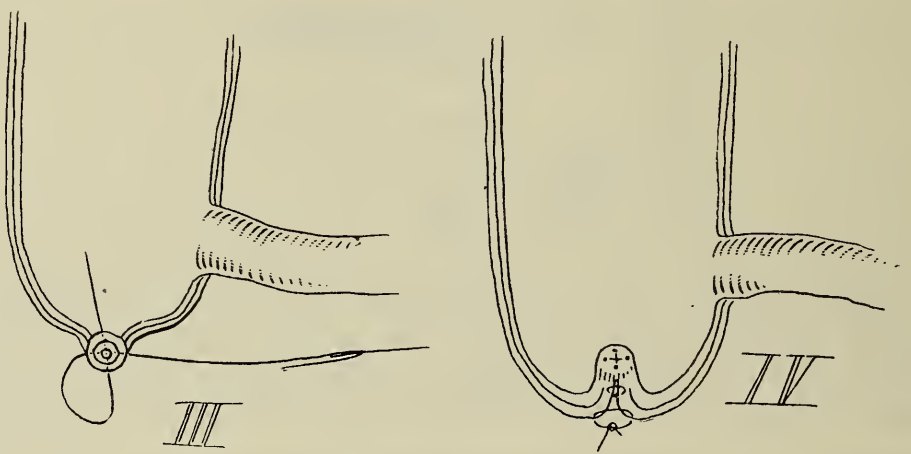
save that the ligature includes only the mucous and muscular coats; then the strangulated, septic, everted, mucous and muscular coats are ligated:



This enfeebled cuff of peritoneum is stitched over the dangerous stump, and some even put in two or three rows of sutures as an additional protection, realizing that they are dealing with a dangerous point. When finished they seem satisfied that they have done the best possible for that patient. Of course they expect the ligated stump to slough, and know that the union of mucous membrane or the serous coat must yield, and are certain that the ulcerative process must open into the bowel. But unfortunately it will not always do so. In closing all other wounds of the gut the approximation is so made that all coats are used to reinforce each other, and there is no place where the application of the generally accepted principles of closing wounds in the abdominal viscera are easier than here. No part of the appendix stump should be ligated to cause possible strangulation leading to slough, and it is better to separate *no* cuff of peritoneum, but to cut off all coats in healthy tissue on the same level, and transfix the stump with two crossed sutures near the margin, which perfectly closes the end and makes a close approximation of all its coats, as per Cut 3.

Then invert, which brings the serous surface in contact throughout the extent of the inversion, and as many reinforcing rows of sutures may be introduced as desired, without the remotest possibility of a slough exceeding more than enough to separate the innermost sutures which are already within the lumen of the intestine, and should be of fine silk or silk-worm gut. The reinforcing sutures may be of catgut if the surgeon is sure that they will hold well for five days.

This plan takes about two moments longer than simple ligation *en masse*, but is more rapid than the cuff-forming plan. Inversion of this small canal causes a complete collapse of its caliber and brings the inner smallest mucous coat so as to surround the stump at all points, effecting a complete approximation of the formerly external but now internal serous coat.



This plan meets all the indications in dealing with wounds of the intestines in general, and there is no known reason why we should exercise so much care at some points and so little at others. With most surgeons the old, careless method of dealing with the appendix was the result of example, and must soon be dropped, unless our generally accepted ideas of the best plans for closing intestinal wounds are found to be erroneous. If we do our operating with reference to the future health and usefulness of the patient, and do not sacrifice all details to speed and operative theatricals, I am sure some of us will be doing a favor to our patients and to the science and art of surgery.

GASTRIC CATARRH.*

BY A. P. BUCHMAN, A. M., M. D.,
Professor of Diseases of the Digestive Organs, Fort Wayne College of Medicine.
FORT WAYNE, IND.

[Written for MATHEWS' MEDICAL QUARTERLY.]

I intentionally avoid the comprehensive term, "gastro-intestinal catarrh," since the diseases, while frequently occurring synchronously or successively, are of a distinctly dual nature.

The classification of diseases of the stomach is exceptionally difficult. In many cases the disturbances are purely functional, in others the disorder seems entirely of a nervous origin. Again, there is a series of difficulties in which there are extensive inflammatory disturbances of the mucous membrane.

It is often difficult, if not well-nigh impossible, to determine which cases are simply functional and which have an inflammatory change as a basis of accompaniment, free from the gastric symptoms, symptoms that only form a fragment of the varied manifestations resulting from gastric disorders. According to that eminent authority, Pepper, under *gastritis*, acute or chronic, may be classified all those cases in which it is probable that some inflammatory change is present, including all those commonly spoken of as gastric catarrh. Writers on this subject, while citing various etiological factors of acute gastritis, including such predispositions as cold, febrile diseases, nervous disturbances, unite in acknowledging as the prime cause the direct action upon the stomach of some irritating substance, the result of an error in diet.

Either some food may be ingested that acts as a direct chemical irritant, or else a greater amount of any food is taken into the stomach than it can at the time digest, although the actual quantity may not be unusually large. In the latter case the disorder is either produced by mechanical irritation, the food being too long retained, or more probably by chemical irritation resulting from some product of decomposition. In this way the quality of otherwise proper and nutritious articles of diet may be impaired and so induce disease.

Regarding the pathology of acute gastritis, the mucous membrane of the stomach becomes inflamed and swollen, and shows

[* The first of a series of articles upon Gastric Disorders, which are to be published in the QUARTERLY, by Dr. Buchman.—ED.]

evidence of small hemorrhages and often even erosions. There is an increase of mucus, and the submucous connective tissue is more or less edematous. The symptoms are varied and many. There is generally a loss of appetite and increased thirst; nausea, eructation, and often vomiting are noticed. The general symptoms include dizziness, headache, depression, and general *malaise*. The bowels may not be affected directly, but constipation followed by diarrhea are almost constant sequelæ. The urine abounds in urates. Fever of greater or less severity may be present, and this symptom divides the disease into two types, the *febrile* and the *afebrile*.

According to the opinion of foremost writers on the subject, chronic gastritis may be due to quite a variety of causes. In point of fact repeated attacks of acute or subacute gastritis is the most important factor. Thus, the primary cause in the chronic form may be regarded as faulty alimentation or overalimentation, or, broadly speaking, the persistent use of an improper diet. According to Pepper and others, neglects of the most fundamental laws of hygiene are factors almost as important in the etiology of chronic gastritis as alimentary errors. Among such he notes those which favor repeated congestion of the mucous membrane by imprudent exposures, sudden checking of the action of the skin, insufficient clothing, etc.

While I would cheerfully admit the importance of these hygienic wrongs as predisposing factors, I would hesitate to class them among the causative factors of the disease.

This is a distinction with a very decided difference that is not sufficiently recognized by the general profession, and the terms "predisposing" and "causative" are often used indiscriminately when the etiology of a disease is under discussion. A subject may inherit a predisposition to certain diseases without even falling a victim to them.

Eminent authorities have also come to regard various constitutional disturbances as predisposing factors, including Bright's disease, diabetes, tuberculosis, gout, uterine diseases, and anemia of any form. The correctness or fallacy of these views I will not discuss here. Suffice it to say, that in many the history of chronic gastritis antedates that of the so-called predisposing disease, pointing clearly, therefore, to the fact that if predisposing

cause there is, the gastritis must be regarded as a factor in the diseases referred to, it being clearly primary and the so-called predisposing factor being secondary.

Pathologically considered chronic gastritis is marked by the pale gray hue of the gastric mucous membrane, especially marked in the region of the pylorus. There are also evidences of pigmentation with scattered areas of injection and patches of ecchymosis.

The mucous membrane is considerably thickened and covered with whitish tenacious mucus which is firmly adherent. The swelling of the mucous membrane is not uniform, but is prominent here and there in spots, giving a sort of warty or papillary appearance to its surface. Circumscribed erosions, and even small follicular ulcers are not infrequently found. The remaining prominent pathological changes consist in a frequent thickening of the submucous and muscular layers of the gastric tissues.

Among the most prominent microscopical changes are either an enlargement or an atrophy of the cells of the glands. The principal and parietal cells are indistinguishable from each other. The tubes are irregular in form, dilated, and with numerous diverticulæ branching from them. Cysts will be found to have formed close to the submucous layer, undoubtedly the result of an occlusion of the isolated glands.

Besides all this, there is an extensive small-celled infiltration between the glands, which presses them from each other, and an increased growth of the connective tissue. The process may now take one or two typical forms, simple atrophy of the mucous membrane of the stomach, commonly called *phthisis ventriculi*, or cirrhotic atrophy. In simple atrophy there is a progressive fatty degeneration of the glandular cells with a steadily increasing growth of the inter-glandular connective tissue. The disease may even advance so far that the entire mucous membrane is destroyed and all that remains is a layer of small round cells and fibrous tissue.

Cirrhotic atrophy differs from the above in that, while the glandular destruction is the same, there is an enormous increase in the thickness of both the submucous and muscular layers, brought about by an overgrowth of both the connective tissue and muscular fibers. The capacity of the organ is reduced to a few ounces in severe cases.

The symptoms are most severe in advanced cases of chronic gastritis. There is often extreme pain, suggesting cancer, and generally profound anemia, although the latter symptom is not always associated with any decrease of the bodily weight. The reader may be inclined to regard this as a rather lengthy dissertation on the symptomatology and pathology of the morbid processes referred to, yet a comprehensive and correct understanding of those details is absolutely necessary for an adequate elucidation of the theory I would seek to confirm.

Turning again to the subject of acute gastritis, we find that the vomited matter consists of undigested food, usually mixed with bile and mucus. The gastric juice is diminished in quantity, and if the type of the disease be febrile hydrochloric acid is absent. According to Beaumont, the stomach is lined with large quantities of thick, tenacious mucus. In cases of an alcoholic origin the organ will also be found to contain large quantities of acetic acid.

In chronic gastritis, or especially so-called flatulent dyspepsia, the changes of gastric digestion may be due to fermentative changes which the ingested food undergoes, and are brought about either by the character of the food, the insufficiency of hydrochloric acid, or the prolonged stay of food in the stomach. Hence this form of dyspepsia, when well marked, is almost invariably associated with dilatation of the stomach.

Acid dyspepsia often occurs in otherwise perfectly healthy individuals, or may be associated with catarrh of the stomach. It has been supposed by the majority of observers that the acidity is due to lactic acid; this seems to be usually the case if much mucus is present. McNaught and Sir W. Roberts have shown, however, that it is occasionally due to increased hydrochloric acid. Particular attention has been drawn by the latter writer to the sudden paroxysmal attacks of gastric cramps, attending which there is very often a sudden rush of saliva into the mouth. This saliva is generally of remarkable alkalinity, being able to neutralize 0.125 per cent. of hydrochloric acid. The secretion of this alkaline saliva is concomitant of the pouring out of a highly acid gastric juice.

Atonic dyspepsia is often dependent, it is claimed, upon general malnutrition, due, in nervous dyspepsia at least, to some

alterated innervation of the secreting apparatus. Hydrochloric acid is frequently absent in such cases, or else only present in traces. Lactic acid may, however, be present in large quantities.

Stopping at this point, let us briefly consider the chemical and physical character of gastric juice, as well as the process of digestion in the healthy stomach.

The essential physiological attribute of the gastric juice is the power of breaking down and dissolving a large part of the solid proteid aliments and converting them into so-called albumoses and peptones. This power depends upon the co-existence in the juice of an enzyme termed pepsin, and an acid which has been shown to be either free hydrochloric acid, or, as Gamgee puts it, a more complex conjugated acid formed by the union of hydrochloric acid with an organic body, which, however, if it exists, is readily dissociated with the evolution of hydrochloric acid. Neither pepsin nor hydrochloric acid are active alone, but a mixture of the two bodies in the presence of the proper quantity of water and at a suitable temperature, acts essentially as a normal gastric juice. While the presence of pepsin in the gastric juice is absolutely necessary, the acid may be replaced by other acids and yet proper and complete digestion maintained. Besides pepsin, which is a proteolytic ferment, the gastric juice contains in man, and certain other animals at least, a milk-curdling ferment called *rennin* by Lea and Foster, and *chymosis* by Deschamps. Unfortunately neither pepsin or the curdling ferment have as yet been isolated as pure chemical bodies, and our present knowledge of them is confined to the result of studies of solutions which contain them in greater or less purity. Apart from the enzymes above mentioned, and a certain quantity of mucus and fat as well as other organic products of digestion, the gastric juice also contains alkaline chlorides, earthy phosphates, and iron. Regarding the presence or character of any gases held in solution or combination, no experiments have as yet been made by physiological or chemical investigators.

The stomach can not be regarded as simply a receptacle containing gastric juice and into which alimentary matter is poured for digestion, it is a most exquisitely sensitive organ, kept constantly at a temperature best suited to digestion, and so constructed as to be able to continually change its capacity according

to the mass of food it contains. This mass it holds, kneads, and turns by means of its perfectly designed muscular structure, and this continually mixes the ingested food with the solvent juice until it is completely dissolved. Apart from this, absorption is constantly going on in the organ, as well as the secretion of pepsin and acid. At a certain point of the digestive process it allows certain portions of the digested matter, that which is finely divided, to drain through the pyloric orifice while the coarser portions are still retained to be further acted upon by a combination of the muscular movements and solvent fluids.

Gamgee and others have found that when food is first introduced into the living stomach, the mucous membrane which was previously pallid becomes injected, and drops of liquid commence to exude from the open mouths of the gastric glands and, uniting, form a stream of gastric juice. Simultaneously the organ contracts around the mass of ingested matter and a series of complex muscular movements occur, which cause, according to Beaumont's graphic description, not only a constant disturbance or churning of the contents of the organ, but compel them at the same time to revolve around the interior from point to point and from one extremity to the other.

It will be seen, therefore, that during digestion this delicately constituted organ is in a state of intense activity and extreme sensibility. Muscles, glands—both secreting and excreting—arteries and veins are all doing their utmost to render the service required of them. An arduous service to say the very least, of equal importance and of far greater complexity than that of respiration. If, from a complicated piece of mechanism, such as a steam engine, a bolt or screw be removed while the machine is at rest, little or no harm will occur. If, on the contrary, the same accident should happen when the engine is running at full speed, a dire catastrophe will very likely be the result.

It is scarcely to be wondered at, therefore, that an injury done to the stomach while it is in a condition of greatest activity and sensitiveness should be far-reaching and most keenly affect the entire organism. How carefully we avoid breathing impure or tainted air, and yet how lax we are in guarding against impure or improper food either in quantity or quality!

What then actually occurs in such cases of acute gastritis

resulting from overloading of the stomach? In the first place the mass of ingestion is so great as to severely strain the mechanism of the organ; secondly, there is insufficient gastric juice secreted to dissolve the mass which remains pressing against the injected blood-vessels, gaping gland ducts, and delicate nerves. The secretion of the organ becomes inadequate, but its absorptive powers may tend to carry into the system toxines, or at least injurious substances which have not been rendered harmless or "digestible" by the action of the gastric juice.

The mechanical injury results in acute inflammation, either circumscribed or far-reaching, as the case may be. The absorption of toxic matter and unchanged or rather undigested foods, results in far-reaching systemic disturbances. The whole mechanism of our delicate organism is thrown out of gear, so to speak, and it is surely not to be wondered at that frequent repetitions of of such ruthless handling of so delicate a piece of mechanism should result in permanent disablement of the whole of that marvelous living engine called the human organism. Let us go a step farther. Granted that the injury has been done, and that the gastric digestion has either been suspended or seriously impeded, either of two things may now happen, the loaded and irritated stomach may relieve itself by vomiting or else the mass of semi or entirely undigested food passes on into the bowels to irritate and injure that organ, either by mechanical irritation or the absorption of toxic substances. Besides this, there is frequently, nay, generally, a direct continuance or spreading of gastric inflammation to the bowel. The latter, as well as the direct irritation from foreign matter, amply accounts for the frequent concurrence or following of intestinal to gastric inflammations. In point of fact, therefore, there are in reality but few cases of gastric catarrh, either acute or chronic, that are not to a greater or less extent gastro-intestinal catarrhs. In the stomach alone the severity of these injuries and the gravity of the lesions they give rise to may be amply seen in the pathology of the same, as I have already described, and the physiological chemistry of the diseases in question.

Apart from the wide-reaching distribution of the sympthetic nervous system, which is so closely associated with the stomach, and which suffers so severely in all cases of gastric disturbances,

from a glandular point of view alone, if I may be allowed to use the expression, the stomach is the main portal of the organism, the keystone in the arch called "life."

I will not in this article touch on those forms of gastric or intestinal catarrhs resulting solely from a nervous origin and quite independent of any alimentary wrong. This phase of the subject will be considered separately.

Again, it will be impossible to prove or disprove within this limited space the correctness or fallacy of many of our eminent authorities in adjudging certain morbid processes as disposing or causing gastric catarrhs, either acute or chronic. We would, however, except from further discussions of this subject such disease clearly of a bacterial origin, or the result of actual poisoning by miasma or toxic micro-organisms. Under this head, for example, would come enteric fever.

Having thus given the reader a description of primary gastric lesions, which I trust will be found lucid and comprehensive, I will in my next article seek to trace the etiological affinity between diseases remote from gastric disorders and diseases of the stomach itself, deeming that sufficient stress has been laid and sufficiently conclusive arguments have been brought forward in this paper to prove the etiology of the latter morbid processes unquestionably dependent upon alimentary wrongs in general and overfeeding in particular.

COMPARATIVE VALUE OF MECHANICAL DEVICES IN MAKING INTESTINAL ANASTOMOSIS.*

BY H. H. GRANT, M. D.,

Professor of Surgery in the Hospital College of Medicine; Surgeon to the Louisville City Hospital.

LOUISVILLE.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

Intestinal anastomosis has superseded circular enterorrhaphy because of the enormous difficulties of the latter method. This latter method is the ideal one, but within recent years it has been abandoned by most successful surgeons, because only with special skill can any thing like satisfactory results be obtained. The dangers in this method are the loss of time in making the suture, the

*Read before the Kentucky State Medical Society.

difficulty of getting accurate approximation of the mesenteric borders, so as to provide against the risk of gangrene, the risk of leakage at the point of suture, the necessity in many cases of extensive resection in order to secure intestine of similar caliber at the point of approximation. These difficulties are enormously increased in many pathological conditions, both acute and chronic, and in many instances the surgeon has not the time to prepare to meet them. Objections equally effective can be made to the method of implantation, and the method of Maunsell is scarcely less free from criticism. These various methods will be presented by other Fellows of the Society, as arranged upon the program, and I shall reserve, until I come to discuss their papers, further reference to the objections and difficulties.

Lateral anastomosis avoids many of these difficulties, and even without mechanical aid is far easier to accomplish, and though at the present time direct suture is the most acceptable method, still these mechanical aids are largely used by the general profession.

The chief objections which lie against mechanical aids are that they make a cumbrous material at the anastomosis; that in all instances a more or less foreign body is introduced; without exception the opening is smaller than safety demands, and that the security of the suturing is always open to question.

The oldest and most widely known of the mechanical devices are the bone plates of Senn. These plates, attractive both in theory and appearance, are bulky in practice, and the opening is limited to not more than an inch and a half. The raw-hide plates which were suggested by Robinson are more manageable, but are most too pliable for security; the potato plates of Dawbarn offer no advantage over the others, save the convenience of manufacture. All of them occasion a very considerable bulk to be reintroduced into the cavity, and to remain as a foreign body for three or four days at least with a necessarily small opening in the intestine. This opening can not be increased in size without not only correspondingly increasing the bulk of the foreign body, but in direct proportion diminishing the security of approximation. At this date no one except their originators uses either of these devices where he can get a Murphy button.

This ingenious device is not to be undervalued. The objections to it, however, have been plainly stated and clearly proved

in recent surgical literature. It is necessary only to refer to them here and to cite you to the publication.*

I present you here one of the buttons, and will describe the method by which it is employed. It accomplishes its purpose well. It is claimed for it by Dr. Murphy, in his classical paper on "Intestinal Approximation," in the *New York Medical Record*, May and June, 1894, that the button can not become a foreign body. In the above-given number of the *Annals of Surgery* are reported four cases, three by Dr. Abbe and one by Dr. Kamerer, in which the button became a foreign body, with a fatal result in three instances. It is also claimed in the same paper of Dr. Murphy that the objection that gangrene of the tissues within the clasp of the button would be a source of danger is purely mythical. In Case 3 reported by Dr. Abbe, above mentioned, death resulted from gangrene in the gut wall at the side of the button. Current literature also furnishes repeated illustrations of this same objection.

The term "pressure atrophy" applied by Dr. Murphy as to the process known to other pathologists as gangrene, or necrosis, is a refinement of terms. Nothing can alter the fact that all that portion of the intestine within the grasp of the button must separate by the process of inflammation and sloughing, call it what you may; but we all know that there are no limitations in nature or science which can successfully control the extent of ulceration on a peritoneal surface, and though the extension of the destructive process into the tissues, supposed to be safely beyond it, is only occasional, still the liability to it is constant and beyond our control.

In addition to this it is well known that the opening made by the Murphy button is too small for lateral anastomosis in the intestine, except perhaps in cases of malignant disease, and though this opening may be large enough for communications between the stomach and bowel in pyloric cancer, still the frequency with which the button falls in the wrong side of the anastomosis has tended to discourage operators against its employment.

The lateral intestinal anastomosis is now beyond all question the most acceptable method of resection of the continuity of the

*Annals of Surgery, February, 1895.

bowel, if we exclude the Murphy button. It is the best accomplished by direct suture; and direct suture, as I have before insisted to the profession, is difficult of successful accomplishment in any thing but very skilled hands. In order to facilitate this suture I have presented several times before a device for the clamping of the opposing surfaces of the bowel, cutting a fenestra between them and retaining them so opposed until the suture can, be completed.

I present you here the complete device. It consists, as you see, of two blades approximated as a clamp, and bearing between them a concealed knife, capable of being withdrawn three and one half inches, which cuts a fenestra of this length. The resection having been made as for any of the other methods, the two cut ends of the bowel are held parallel, and one blade of the clamp slipped into each, about five inches up the lumen of the bowel; the clamp is then tightened, and held firm by a clasp on its handle; two provisional sutures are applied upon each side to prevent retraction of the edges when the fenestra is cut. The blades are covered with rubber tubing to prevent too great pressure on the gut walls. The concealed knife is now drawn out and pushed back again so as to insure division of the surfaces, and, while the clamp is held by an assistant, the surgeon rapidly runs an overhand suture of silk completely around the clamped surfaces, including the peritoneal and muscular coats; one row of sutures is enough. The clamp is then withdrawn, the finger introduced to assure the patency of the opening, the open ends invaginated, the cut surfaces of the mesentery secured against hemorrhage, and the anastomosis returned to the abdominal cavity. It can be easily accomplished in twenty to twenty-five minutes under ordinary circumstances; practice and skill can accomplish it in less time, and only considerable difficulties can prolong it to an hour.

I have experimentally used this clamp sixteen times with fourteen consecutive recoveries. I have had but one opportunity to use it in practice. On May 25th of this year I operated upon Mrs. E., aged fifty-one years, who had a fecal fistula at the right femoral opening, the result of a strangulated hernia operated on eight months ago. She was in very depressed health, much emaciated, with swollen feet and legs and very feeble circulation.

An incision was made just above Poupart's ligament, near the fistulous opening. The fingers easily liberated in a few minutes the intestine, which presented an opening occupying half its lateral surface, about as large as a quarter of a dollar: I show you here the specimen. The mesentery was greatly thickened; the distal segment of the bowel was reduced in size, the proximal dilated at the site of the fistula. About four inches of the intestine were resected; the blades of the clamp were applied opposite the mesenteric borders of each segment, and the anastomosis made as above described. After the suturing Drs. Cartledge and McMurtry examined the communication between the opposing surfaces and found it ample; the cut ends were then invaginated, and the anastomosis returned; the abdominal wall closed up with silkworm gut sutures; the site of the fistula curetted and filled with iodoform gauze, and the patient put back to bed in forty-two minutes. Notwithstanding her feeble condition she reacted without difficulty. There was very little shock. The pulse never went above 100; the bowels moved on the second day in response to an enema, and she has steadily progressed in convalescence to the present time, and is now able to be about the halls of the institution. The operation was performed at the Norton Infirmary, and there were present Drs. McMurtry, Cartledge, and Mathews, of this city, and Cook, of Indianapolis.

The advantages of this method over the other aids, except the button, are manifest. Not only does it do away with the foreign body, but cuts an opening three or four inches long at the fenestra. It is fully as easily accomplished, and takes if any thing less time. It is no more difficult to use than is the button, but the operation can not of course be so quickly completed, as the invagination of the ends is not necessary after the end-to-end approximation by the button.

I must not be understood to disparage the button, it is a wonderful help, but it has great disadvantages. Is there a man in this audience who would voluntarily swallow one of them for one hundred dollars! Surely not. Yet in all operations on the stomach and small intestine the button must pass the ileo-cecal valve. The clamp merely makes the direct suture easy to any ordinarily skilled hand, and does away with the foreign body afterward.

It can be employed with equal facility in gastro-intestinal anastomosis without resection, by simply making a small slit in the walls to introduce the blades.

The clamp is manufactured by William H. Armstrong & Co., of Indianapolis, Ind.

DIAGNOSIS AND TREATMENT OF ACUTE INTESTINAL OBSTRUCTION.*

BY JAMES M. BARTON, M. D.,
Surgeon to the Jefferson College Hospital and Philadelphia Hospital.
PHILADELPHIA, PA.

Within the last few years the public are ready to accept surgical aid with much less deliberation than formerly, but they still deliberate too long in cases of acute intestinal obstruction. Until recently the chance to operate at all, in such cases, was extremely rare, and unless our successes are greater than they have been there will be but little to encourage the sufferer in future to submit to the knife. The mortality is enormous, and is almost entirely due to delay in operating. If it were done early, when the patient is yet in good condition, but few would perish from an abdominal section lasting twenty minutes and almost bloodless.

The story is the same, both in hospital and in private, the patient is usually in a dying condition by the time the operation is agreed to. The writer narrates one case in full, as a type, where the patient was sent to him, two hundred and fifty miles, sitting up in a railroad car, on the eighth day of the disease and the fifth of stercoraceous vomiting. His collapse was so great that though the operation lasted only ten minutes he perished some hours later. If this man had been operated on five days sooner, when fecal vomiting began, he would have recovered.

The severity of the symptoms in acute obstruction does not depend upon the fact that the intestine is obstructed—this may be complete and exist for days and weeks and yet the patient be in fair condition—but depends upon the injury to peritoneum,

* Abstract of paper read before the Pennsylvania State Society, May, 1895.

intestinal wall, and to the interference with the vascular and nervous supply to the parts. Later auto-intoxication, from fecal matters absorbed from the stomach, increases the depression.

Acute obstruction is divided into four forms:

1. Strangulation by bands or through apertures. This occurs most frequently in young adult males with a history of a preceding peritonitis. Vomiting begins early and is generally stercoraceous. Constipation is continuous and absolute; tenesmus is absent. There is great prostration. Such cases require immediate operation, as death usually takes place by the fifth day.

2. Volvulus usually occurs in the sigmoid flexure, the bowel is twisted tightly enough upon itself to at once obstruct the nervous and vascular supply. It occurs in males over forty who have suffered from constipation; the pain is severe but intermittent; local tenderness appears early; vomiting appears late and is rarely feculent; constipation is early and absolute; prostration is severe; tenesmus is rare; the abdomen soon becomes rigid.

3. Acute intussusception occurs in children; a tender tumor can often be felt in the abdomen and occasionally in the rectum. Absolute constipation is rare; diarrhea with blood is not uncommon. Obstruction from foreign bodies or from any of the chronic forms, suddenly becoming acute, does not differ, except in the preceding history, from the first form described. It is not well to spend valuable time in attempting to differentiate among the causes that may produce intestinal obstruction, it is enough to know with certainty that the intestine is obstructed and the obstruction is not due to fecal impaction.

Diagnosis of Acute Obstruction. An individual, probably in perfect health, is suddenly seized with severe abdominal pain; like colic, it may remit or distinctly intermit. The abdomen is not tender at first; copious and severe vomiting appears early; the matters vomited are at first food, then bile, then coffee-ground looking material, and lastly it becomes stercoraceous; before the coffee-ground looking material appears mouthfuls of reddish water are often brought up without nausea and without retching. Except in cases of intussusception the constipation is absolute, not even wind passing; there is abdominal distension

and marked shock. Acute obstruction must be differentiated from:

1. Ordinary *Colic from Indigestion,* which is preceded by signs of indigestion; gaseous eructations accompany the vomiting, gas is freely passed by the bowel; diarrhea usually accompanies or terminates the attack; the vomiting never becomes coffee-ground or fecal.

2. *Lead Colic* has a history of exposure to lead, of increasing constipation preceding the attack. There is a blue line on the gums, wind passes by the bowel, and the vomiting never becomes stercoraceous.

3. *Hepatic Colic.* Here the pain is at the margin of the right ribs; it is intense with complete intermissions. The vomiting is never feculent; there is no constipation; gas passes freely; there is no abdominal distension; the vomiting is not severe; there is tenderness in the hepatic region; light jaundice may be present; chills and fever occasionally occur.

4. In *Renal Colic* the pain begins in the back, over one or the other kidney, then passes down the ureter, radiating to the testicles and thighs. The urine is scanty and may contain blood; it is passed frequently and with pain. There is no constipation, no abdominal distension, and no fecal vomiting.

5. In *Appendicitis* the vomiting ceases in a few hours and never becomes stercoraceous. The pain increases and is limited to the right iliac fossa. There is frequently a distinct mass and always an exquisitely tender spot to be found in the same region. The temperature is usually elevated and constipation is unusual.

6. In *General Peritonitis* a history of injury or preceding disease can usually be found; the bowels act freely, and wind passes readily in the early stages of the disease; the vomiting is rarely violent, the temperature is often elevated.

7. *Fecal Impaction* is most common in adult females with mental troubles; there is a history of long-continued constipation. Vomiting appears late, comes on gradually, is scanty, and rarely feculent. The retained feces can be felt in the colon.

Treatment. The medical treatment amounts to nothing; it consists in washing out the stomach, kneading the abdomen, inverting the patient, and giving enema of air, gas or water. It is rarely successful, exhausts the patient, wastes valuable time,

and occasionally ruptures the intestine. In but few of the cases I have seen would there have been the slightest hope that reduction would follow any of these methods. And even in those less damage would have been done by a clean incision made early.

If these medico-mechanical methods are tried and not immediately successful, the abdomen should be at once opened, and under no circumstance delayed after the appearance of coffee-ground vomiting. When acute obstruction is suspected all preparations should be at once made for the operation, so that the moment the diagnosis is unmistakable there may be no delay whatever; it ought to be usually done within twenty-four hours of the appearance of the symptoms.

If the location of the obstruction is known the most convenient incision is made; if not known, a median incision just below the umbilicus and large enough to introduce the hand is employed. If the seat of the trouble be not at once evident the head of the colon is sought. If it be distended the obstruction is in the large intestine and is readily located; if it be not distended the collapsed ileum is rapidly passed through the fingers until the seat of the difficulty is found. If the obstruction is due to a band, it should be removed close to its attachments so that it may give no further trouble. When it is due to an adherent appendix or Meckel's diverticulum, they should be entirely removed. In strangulation through slits or apertures it is well to close the abnormal opening after the gut has been reduced. If the strangulated gut be gangrenous, it should be removed and an artificial anus made; an anastomosis operation may be performed later, if the patient survive. In acute obstruction he is never in a condition to have the shortest anastomosis operation performed at the primary operation.

A volvulus must be untwisted and an intussusception reduced. If reduction is impossible an artificial anus must be made above the obstruction.

If, after we remove an obstruction, no matter what its nature, the bowel be greatly overdistended, it must not be left in this condition, but must be emptied, even if we have to puncture it for the purpose or establish an artificial anus.

If the patient is in extreme collapse, with a rigid distended abdomen, operation should not be refused. No anesthetic should

be given, as it is apt to provoke fatal fecal vomiting; heat and strychnia should be freely used. A short median incision below the umbilicus should be made, just large enough to permit a finger to enter and bring out the first distended loop of bowel that presents itself, an artificial anus made and opened at once.

If the patient is to be sent to a city hospital, wash out the stomach and give stimulants, use strychnia hypodermically, put the patient on a stretcher and surround him with artificial heat, send short, plain history, telegraph surgeon so that the ambulance may meet the train and there be no delay when the patient reaches the hospital.

1337 Spruce Street.

MODERN METHODS OF INTESTINAL ANASTOMOSIS.*

BY AUGUST SCHACHNER, M. D., PH. G.,
Surgeon to Louisville City Hospital; Demonstrator of Anatomy, Louisville Medical College.
LOUISVILLE, KY.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

If the direct results of all of Professor Senn's labors were to be proven erroneous he would, by the matchless impression which his efforts have indirectly created, nevertheless stand as one of the most forcible figures in the surgery of the Nineteenth century. Indirectly these efforts are more responsible than those of any other single surgeon, or perhaps a number of surgeons, for the establishment of one of the most brilliant schools known in the entire history of surgery. Many valuable and ingenious suggestions, ideas, and devices have been given us by others, and since the time of Senn's first labors in this direction; but who could prove that in the absence of Senn we would still have made the same rapid advances which we have made and which we believe to be due to that fruitful tide which has been created and kept alive by the energies of this surgeon.

Viewing the question of intestinal surgery from a general standpoint we see an almost equal division, with one side in favor of devices of one variety or another, and the other side in favor of methods involving the suture alone. In America there seems

*A paper read before the Kentucky State Medical Society.

to be a predominating influence in favor of some character of device, while among the European surgeons many brilliant efforts have been made in behalf of the suture *per se*. As to which will gain the final supremacy, or as to whether there ever will be such a condition as a final supremacy, it is difficult to foretell; but, speaking in general, we can not deny that, all things being equal, we must consider the suture as the more surgical method of the two. To illustrate further, if we were to select two methods of known and equal safety, the one involving the suture alone, and the other involving a device alone, we can not help but admit that in the one which involves the suture only the surgeon is the complete master of the situation, fulfilling practically to the end the whole object of the method and assuming the responsibility of the final result, while in many of the devices the most important feature of the method is carried out by the chosen device, thereby becoming, so to speak, the chief factor in the method and assuming the major portion of the shifted responsibility.

The truth is, that in order to intelligently understand one another and to thoroughly appreciate the details of this important question we must divide the cases requiring intestinal interference into two classes, namely, the *planned* and *emergency* class. In the planned cases we presume to know before the operation is begun the tolerance of the subject and about the character of the interference. While our aim is not only to save life, which it is unnecessary to say is at all times and under all circumstances the chief and sole aim of the surgeon, but we desire to save life with the best subsequent result. In emergency cases the condition of affairs may compel the surgeon to select methods which have as their sole aim the bridging of the subject over the impending crisis without any special reference to the subsequent condition. In short, measures which would be thoroughly undesirable in the planned case may become eminently justifiable in an emergency case. Present indications point to the fact that the time is not far distant when we will be able to operate upon all the planned cases by the suture alone, and that the devices will practically be relegated to those cases of an emergency character.

The chief advantage which the devices have over the suture is the saving of time. That this is a considerable advantage no one will deny, but we believe that the saving of fifteen or twenty

minutes does not always justify us in closing our eyes to the sutures and to select an otherwise inferior method. In fact, as it has already been pointed out by others, the saving of this time does not in many cases make any material difference.

Another argument that we frequently hear during discussions on this subject, is that sutures would be justifiable in the hands of certain operators and equally unjustifiable in the hands of others. Surely this can not be considered in any but the light of a very lame argument. While every one must admit that all can not possess the same standard of operative skill, yet still every one who pretends to perform intestinal operations should possess at least the necessary skill to satisfactorily carry out such measures which the exigencies of the case demand, whether it be suture or device. Mr. Maunsell is quite right when he refers to our training as being too much of a "bookish" nature. We are too anxious to learn the art of surgery from a well-written piece of paper instead of from an actual manual training. We are too ready to consider as beneath our dignity a few lessons which a first-class tailor might profitably give us in the art of sewing.

The success of Lawson Tait—who, according to his own confession has served his apprenticeship at the lathe, the bench, and the forge—no doubt is largely dependent upon his remarkable operative skill. The art of surgery can be elevated to a degree of perfection only by careful cultivation in its fundamental principles, and cultivation which should never have its commencement upon such precious material as the human subject.

Apart from all this, however, it must be apparent to even a casual observer that *hard* and *fast* lines governing every case can never be laid down, and that after all every case must more or less be a law unto itself, and the key to the successful management of any of the cases depends upon the correctness of the operator's judgment and the perfection of his operative skill.

Next to the question of deciding between the use of the suture or the mechanical device is that of selecting the lateral or the end-to-end method of establishing the intestinal continuity. In many cases the choice of the method is out of question, but where the conditions tolerate a preference it should always be given to the end-to-end method as the most natural way of establishing the communication. Not alone is this the most natural

way, but by this method there is practically no subsequent contraction, which always occurs by the lateral method, as is illustrated by the following cases reported by Abbe:

"Three of the author's (Abbe) cases of lateral anastomosis illustrate the subject admirably. In the first, done in 1888, between the ascending and transverse colon, Senn's plates were used—the patient dying six months after operation. The aperture, which was one inch and a half in length, had contracted to three fourths of an inch, and was sufficient for its purposes only when laxative medicine was constantly given. In the second case, the patient dying six months after anastomosis with catgut rings, the opening had contracted from one inch and a half down to half an inch. In the third case, eight months after lateral anastomosis of the sigmoid by suturing, the aperture contracted from three inches to one and a half. This was perfectly competent to do the functional work of the bowel." (Annals of Surgery, vol. 15, p. 391.)

In a number of resections, some of which were performed in connection with this paper, but most of which were made about two years ago, there was a turning in of enough of the intestinal wall as to almost create a perfect diaphragm, and at the end of several months there was but the slightest amount of annular constriction remaining, while, if but a small amount of the intestinal wall is inverted, the seat of the operation can in many instances never be made out.

Where lateral anastomosis is indicated time can often be saved by the use of mechanical devices, such as the clamp devised by Dr. H. H. Grant.

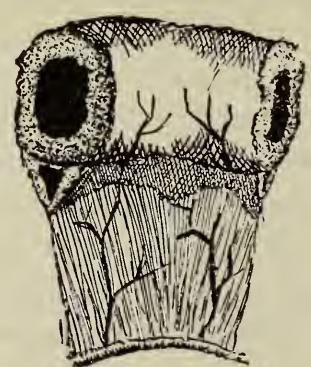


FIG. 1.—Showing absence of serous covering at mesenteric border of intestine.

The distribution of blood and the arrangement of the serous covering of the gastro-intestinal tract, while known to every med-

ical individual, have hardly been presented with the emphasis which they deserve. The blood-vessels, as we all know, practically take their origin from the curvatures of the stomach in supplying that organ with blood. From the curvatures the vessels space off toward a point midway between these two borders, leaving a strip devoid of any vessels which are likely to cause any troublesome hemorrhage. When possible the operative measures should always be carried out as near as permissible to this point. In the intestine the corresponding point is located just

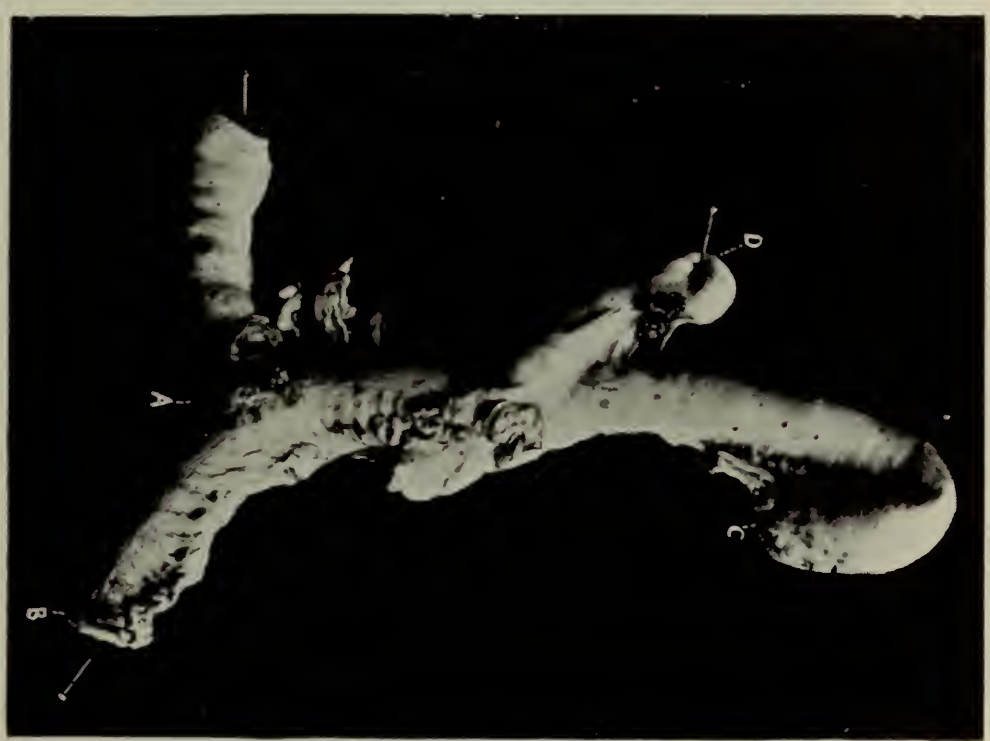


FIG. 2.—Ileo-colostomy by Maunsell's method. *A.* Site of implantation; *B.* Colon; *C.* Invaginated ileum; *D.* Appendix vermiformis.

opposite to the mesenteric attachment, and should for this as well as any other reason, when allowable, be given the preference in all operative interference.

To thoroughly understand the arrangement of the serous covering of the intestines we have but to throw a bandage over some cylindrical body, drawing the two overhanging ends fairly taut. By this means will readily be seen a triangle, the walls of which are formed by the bandage, and the base being occupied by the lower

border of the cylinder. It will be noticed that this narrow strip of the intestinal wall is practically devoid of serous covering and that the triangle is occupied by connective tissue and important vessels which parallel the intestine. In all operative measures this portion of the intestine should be given a wide berth ; and,

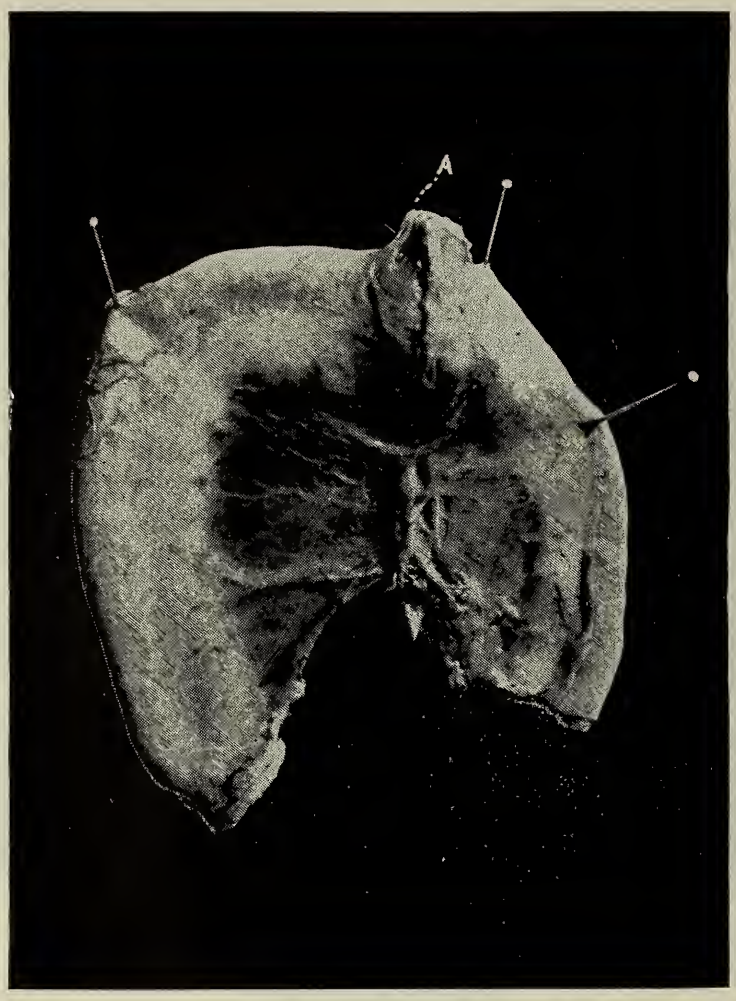


Fig. 3.—Intestinal resection by Woelfler's method. *A*. Site of operation.

should any interference with this part of the intestine become necessary, it should always receive the most watchful attention that its closure becomes perfect and that no unnecessary disturbance with its blood-vessels may occur.

The present condition of intestinal surgery has reached such a standard as to demand something more than mere novelty from

any new method, and those which now occupy the surgical world can be conveniently arranged as follows:

1. *Mechanical Devices.* (*a*) Senn's Decalcified Plates; (*b*) Dawbarn's Potato Plates; (*c*) Von Baracz's Turnip Plates; (*d*) Abbe's Catgut Rings; (*e*) Murphy's Button.

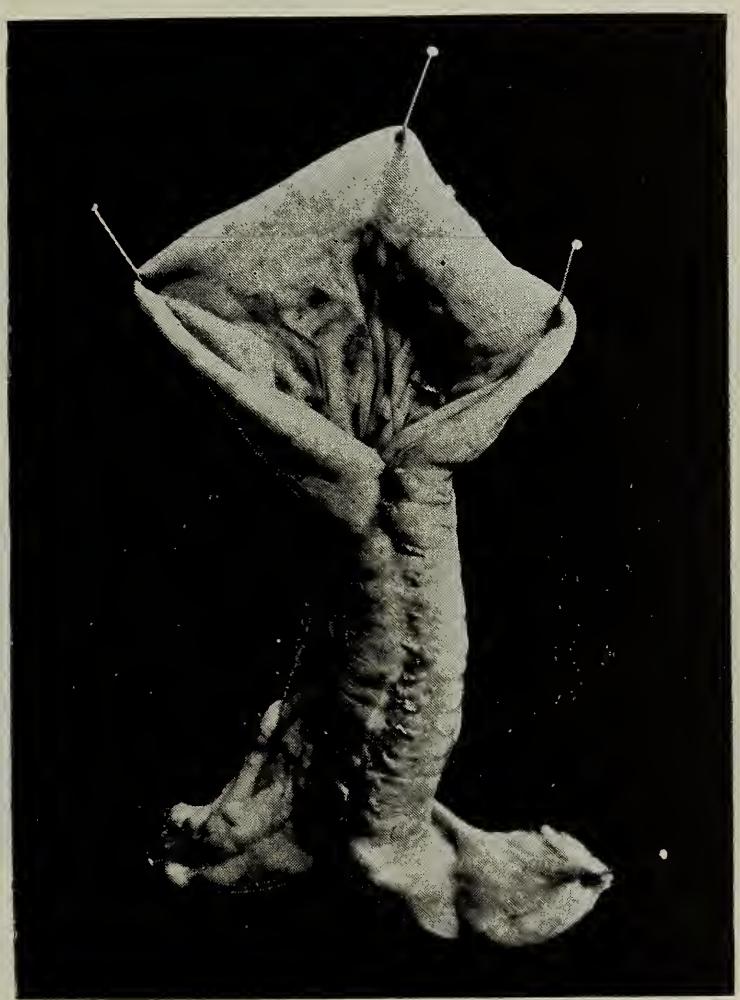


FIG. 4.—Abbe's method of lateral anastomosis by sutures.

2. *Sutures.* (*a*) Woelfler's Method; (*b*) Maunsell's Method; (*c*) Jessett's Method. (Figs. 2, 3, and 5.)

To go into details with any of the above methods is not only unnecessary but would occupy more time and space than would be expected. In fact, we almost believe that the sutures alone require any special attention so far as any description is concerned, since the others have already received sufficient attention

in the pages of current literature to make any further descriptive remarks unnecessary.

The chief objections that have been raised against the Senn's plates and Abbe rings are that often they are difficult to obtain or prepare, and in their safety are hardly superior to the plates prepared of potatoes or turnips.

Against the plates prepared of potatoes or turnips have been urged the objections that they are large and somewhat clumsy,

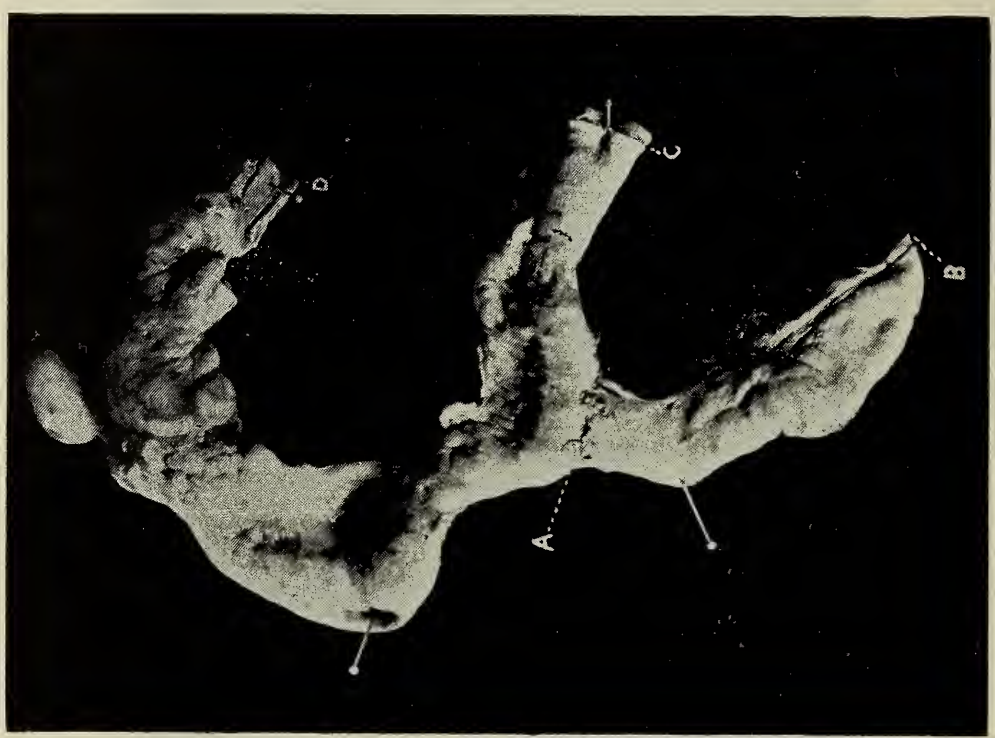


FIG. 5.—Ileo-colostomy by Jessett's method. *A*. Site of implantation; *B*. Ileum; *C*. Colon.

and by their size they excite peristalsis and produce, as it has been said, "a tugging at the wound." The advantage of these plates, however, can readily be seen. They are easily prepared and from material that is readily obtainable, besides being absorbable in their nature.

The latest and one of the most brilliant of the devices that have been offered is the button devised by Dr. J. B. Murphy, of Chicago. While the button has passed through a most brilliant probatory period of existence, its final scope of usefulness yet

remains to be outlined. So far the objections which have been urged against the button are:

1. The contraction of the opening, especially in a side-to-side anastomosis.

2. The button acting injuriously by assuming the rôle of a foreign body.

3. The possibility of the button causing trouble by becoming arrested at the ileo-cecal valve.

4. The chances of the button dropping in the wrong direction, that is, into the stomach in a gastro-enterostomy, or into the isolated loop of the intestine in an intestinal anastomosis.

5. The possibility of the button not disengaging itself or of becoming arrested in some part of the intestinal tract.

6. "It makes the patient dependent upon the craft of the cutler rather than the skill of the surgeon."

7. The chances of the necessary pressure atrophy in failing to liberate the button.

The arguments for and against the first six of these objections have been reviewed in a paper read before the Louisville Academy of Medicine in the beginning of the year, and were in the May number of the *Medico-Surgical Bulletin*. As for the seventh objection, we have not been able to learn of any case in which the pressure atrophy failed to liberate the button; but this did occur in an experimental operation in which the button was used in performing a cholecyst-duodenostomy. This operation was performed in February, and the dog was sacrificed in June. Upon examination the button was still firmly enclosed in its original position but presented a very corroded appearance. While, as we have said, it is impossible to establish the limit of usefulness to which the button may be subjected, there are at least two operations that seem particularly adapted for its use, that is, cholocyst-duodenostomy and end-to-end anastomosis. In the lateral anastomosis the opening which even the oblong button can supply is rather small when we consider the subsequent contraction which follows this operation.

[TO BE CONTINUED.]

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. II. LOUISVILLE, JULY, 1895. No. 3.

JOSEPH M. MATHEWS, M. D., - - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

HIGHER MEDICAL EDUCATION.

It was once said that, whenever a man had a son who by the want of intellectual endowment or the absence of the proper qualifications was unfitted for a business life, the father immediately proceeded to make a doctor of him. If one will take the time to notice the class of men that have been annually graduated from even the best colleges in the United States, it will not strain the imagination much to see that this statement has a grain of truth in it. Fortunately for our pride, our self-respect, and for the good of the people at large, that day has passed. It was glad tidings to the medical profession of this Union to hear the echoes from the meeting of the American Medical Association, at Baltimore, demanding a four-year course in medical education before receiving recognition in that great body as a member. The interest was made more manifest when it was announced that the American Medical College Association would require a four years' attendance before graduation. It is very pleasing to note that the four medical colleges of this city, with great unanimity, applauded this move and gave their allegiance to the Association. The good results from such action can be easily seen. Whereas the classes attending medical colleges will be greatly decreased, the quality will be materially improved. This action of the College Association will work a hardship to

no one, but will be the means of protecting a large class of people who can not, or will not, protect themselves. There can be no greater work for the profession to do than to extend its helping and protecting hand to humanity. The State Boards of Health have for a long time been making a noble fight in the direction of a higher medical education, and now that they have as powerful allies the American Medical Association and the American College Association, their efforts will be greatly strengthened. Besides these great advances, looking to the accomplishing of a great purpose, there are fifteen States in the Union that have State medical examining boards. Whereas it might be said by some, that inasmuch as the two great associations named have put forth such requisites that State examining boards would be superfluous, yet it can not be gainsaid that their existence is to be commended. In view of the fact of all these things, it can be said that, in a few years at least, the medical profession of America will stand abreast and be equal to that of any European nation. The curriculum of medical colleges has undergone a wonderful change, and instead of a dry course of didactic lectures, which meant but little and taught nothing, we have now the majority of the course spent in the laboratories and in clinical teaching. To-day the medical student can receive as perfect instruction at home as he can abroad, and equally in the South or West, as he can in the North or East. There should be no jealousies in the medical profession, or in medical teaching, but we should stand as one man, fighting ignorance on the one hand, and uplifting a higher medical education on the other.

A MEETING OF RECTAL SURGEONS AT BALTIMORE.

Prior to the meeting of the American Medical Association at Baltimore, Dr. Earle, of that city, communicated with a few of the distinguished surgeons in the United States who limited their practice to diseases of the rectum. In response to his invitation quite a number assembled at the Stafford Hotel and

talked over the advisability of forming a national association of rectal surgeons. It was not deemed advisable at that meeting to effect an organization, but it was agreed that at the next meeting of the American Medical Association, which will be held at Atlanta, Ga., such an association should be formed. During the interim it was suggested that each one present be assigned a certain territory, and that by all means possible the names of the legitimate specialists engaged in this special practice should be ascertained, and that they be invited to attend the meeting at Atlanta. It was fully recognized that diseases of the rectum was now a legitimate specialty, ranking alongside with the others that are older and perhaps better known. Impostors in this line are to be weeded out, and only those of recognized ability and proper intentions are to be recognized. One object of such an association is to enable those engaged in the special practice through the Union to become better acquainted, and to give each other the benefit of an individual experience in the treatment of these diseases. Much has been done in the last decade to advance the scientific part of this work, and it might be said that in no other line has such original work in a surgical way been accomplished. We hope for a full attendance at the Atlanta meeting.

KENTUCKY STATE MEDICAL SOCIETY.

As we go to press, we have just returned from the fortieth annual meeting of the State Society, one of the most successful in its history, held in the historic town of Harrodsburg, on the 12th, 13th, and 14th of June. Not only is Harrodsburg noted as the oldest town in the State, but here Dr. Henry Miller was born, whose first struggles were in his native town, but afterward of national fame, being a president of the American Medical Association.

The Society accomplished much scientific work under the able presidency of Dr. Joseph B. Marvin. The papers and discussions were interesting, this being especially true of the special discussions on diphtheria, hernia, and obstetrics.

The secretary's report showed the Society to be in a flourishing condition, and twenty-two new members were admitted. Dr. John Lewis, of Georgetown, was chosen as the next president, Dr. H. H. Grant as vice-president, and Lebanon as the next place of meeting.

MR. HARRISON CRIPPS, F. R. C. S., ENG., 1875; M. 1872.

We present as a frontispiece in this issue a photograph of Mr. Harrison Cripps, of London, England. Mr. Cripps has occupied a foremost position in the ranks of rectal surgeons, and it gives us pleasure to present his likeness to our readers.

Mr. Harrison Cripps was born in Oxfordshire, England, 1850, his father being the well-known barrister, H. W. Cripps, Queen's Counsel. His mother was a Miss Lawrence, niece of the celebrated surgeon, Sir William Lawrence. Mr. Harrison Cripps entered St. Bartholomew's in 1868, and was appointed House Surgeon in 1872. After ten years of office he was appointed Demonstrator of Anatomy in the St. Bartholomew's Medical School, an appointment he held till 1878, when he was appointed Surgical Pathologist to the hospital. After holding this appointment for three years, he was appointed Assistant Surgeon to the hospital. Besides his duties as surgeon to the hospital, he was especially selected in 1891 as the member of the hospital staff to perform the ovariotomies and other abdominal sections required in the woman's ward of the hospital, an appointment he still holds.

In 1877 Mr. Harrison Cripps was awarded the Jacksonian Prize by the Royal College of Surgeons for his essay on "The Treatment of Cancer of the Rectum, particularly as Regards the Possibility of Curing or Relieving the Patient by Excision of the Affected Part," the prize subject for the year 1876. This essay was published and has run through several editions.

The last account of Mr. Harrison Cripps' work on rectal cancer was in a paper read before the British Medical Association at

their meeting at Nottingham in 1892, when he recorded the results of four hundred cases coming under his notice.

Mr. Cripps has published many papers on the advantages of inguinal colotomy for rectal cancer where the symptoms of stricture are well marked and the growth can not be removed.

Before being appointed on the surgical staff of the Royal Hospital of St. Bartholomew, Mr. Harrison Cripps was surgeon to the Great Northern Hospital and Royal Free Hospitals, London, which appointments he resigned on being elected at Bartholomew's in 1881.

Mr. Harrison Cripps became a member of the Royal College of Surgeons, England, in 1872, and a Fellow of the same college in 1875; Vice-President of the Pathological Society of London in 1893.

He has been a frequent contributor to medical literature, the following being some of his published articles: "Diseases of the Rectum and Anus," 2d edit., 1889; "Diseases of the Rectum," Treves' Manual of Surg., 1886; "On Passage of Air and Feces by Bladder," 1888; "Hemorrhage from the Palmar Arch," Clin. Soc., 1874; "Secondary Hemorrhage after Ligature of the Femoral Artery," St. Bart. Hosp. Reps., 1874; "On the Continuous Registration of Heat," Proc. Roy. Soc.; "Hemorrhage from Posterior Tibial Artery," St. Bart. Hosp. Reps., 1875; "Hemorrhage from Punctured Wounds of Mouth and Throat," Med. Chir. Trans., 1878; "Secondary Hemorrhage after Amputation of the Thigh," Clin. Soc. Trans., 1880; "Minute Anatomy of Adenoid Rectal Growths," Path. Soc. Trans., 1881; "Pathology of Galls," *Ibid.*, 1884; "Malformation of Rectum," St. Bart. Hosp. Reps., 1882; "Abscess," "Fistula," "Gangrene," Holmes's Syst. Surg., 3d edit.; "Hemorrhage," etc., Heath's Dict. Pract. Surg. Contrib.; "70 Cases of Rectal Cancer Treated by Operation," Brit. Med. Jour., 1889; "Ovarian Cysts Communicating with the Rectum," Medical Society of India, 1894; "400 Cases of Rectal Cancer," British Med. Jour., 1892; "Inguinal Colotomy," Harv. Soc. Trans., 1889; Papers to Lancet, etc.

Necrology.

DR. W. CARROLL CHAPMAN.

The profession of Louisville has sustained a great loss in the death of Dr. W. Carroll Chapman on Tuesday, May 28, 1895. Dr. Chapman was taken sick two days after his return from the meeting of the American Medical Association and the Baptist Convention in Washington, with what was supposed at first to be a sharp attack of malaria, but there was no improvement in his condition, and finally a diagnosis was made of cerebro-spinal fever, from which he died on the twelfth day of his illness.

His death is greatly to be deplored, for few young men in the profession had so bright a future before them as did Dr. Chapman. "He was a graceful writer, a conscientious student, a clear teacher, a skillful practitioner, a Christian, a scholar, and a gentleman."

He was born in Hartford, Ky., in 1863, having been left an orphan at an early age. He attended school at Cecilian College, where he graduated in his seventeenth year. Immediately after this he read medicine with his preceptor in Hartford for several years, then attending the College of Physicians and Surgeons of Baltimore, where he graduated in medicine in 1884. He served as an assistant in the out-door department of this college, and was soon made an assistant demonstrator of anatomy. He received the appointment as Resident Physician at the Maternity Hospital, remaining one year. He returned to his native home and practiced about one year, moving then to Louisville, where he has been practicing continuously ever since.

At the time of his death he was Assistant to the Chairs of Practice and Chemical Physiology in the Kentucky School of Medicine, a member of the Louisville Academy of Medicine, before which he read a paper recently on "Gastritis;" a member of the Kentucky State Medical Society, before which he was to read a paper at the last meeting on "The Chemical Changes in the Stomach as a Cause of Disease," the data of the paper being

made up from original investigations conducted by him at the Kentucky School of Medicine Dispensary. He was a member of the American Medical Association, having just returned from the meeting in Baltimore; a member of the American Medical Editors' Association, having been the editor of "*Progress*," a medical journal published in this city, for some years. He was a member of the Publication Committee of the State Society, appointed at the meeting of last year. He labored long and hard upon the Transactions of the 1894 meeting of the State Society, and it was his ambition to see a volume appear which would be a credit to the State and the committee which spent so much time over it, and it is a sad fact that upon the day of his funeral the first volumes of the completed Transactions were delivered. He did not live to see the fruits of his labor. Dr. Chapman was a prominent Mason, and was a member of the Baptist Church, having been a deacon for some years.

His associates, the sub-faculty of the Kentucky School of Medicine, met and adopted suitable resolutions of respect upon his death, as did the class at the college, and the Louisville Academy of Medicine.

Dr. Chapman left a widow and one child, a girl three years old. His wife was a Miss Kelly of this city.

Among the papers of which Dr. Chapman was the author are the following:

1891. Resorcin as an Antipyretic. Read before the Kentucky Medical Society, May, 1891. Toxic Effect of Tobacco Vapor. *Virginia Medical Monthly*, Vol. 18, page 638. This article was printed in about half a dozen medical journals.

1892. What is our Advance in Pulmonary Therapeutics? *Toledo Medical and Surgical Reporter*, Vol. 5, page 567.

1894. Diphtheria; Primarily a Local, Secondarily a Constitutional Disease. *Medical News*, Philadelphia, Vol. 64, page 67. Membranous Croup. *Medical Progress*, Vol. 10, page 158.

A Word to the Busy Doctor.

A GREAT deal has been written lately on the subject of the reflexes as concerns the physician in practice. Very many erroneous things have been said and written concerning the part that the reflexes play in disease. It is left with the painstaking physician to sift the untruth from the truth, and to get at the part actually played by such influence. It is very natural that the specialist in any line may often be able to trace certain disturbances of the general system to the part that it is his pleasure to treat. And yet we well know that the physician in general practice more often meets with disease caused by reflex action, than either the specialist or general surgeon. I have no doubt that cases regarded with great significance by the uneducated specialist have been relieved by the practitioner by a dose of calomel and santonine given to a child suffering with worms. And yet to the scientific observer it is often clearly discernible, and can only be relieved by the specialist.

As regards the rectum as a seat of reflex, it can clearly be stated that much physical trouble is caused therefrom. Women who suffer from supposed ovarian or uterine pain, may have the cause for the same from a slight *proctitis*. Men who suffer pain in the bladder, prostate or urethra, may find an explanation for the condition in an inflamed hemorrhoid. Persons who suffer from diarrhea, or supposed dysentery, or perhaps from obstinate constipation, may have their cases explained in the observance of a close and spasmodic condition of the sphincter muscle. Infants who cry out with pain and are dosed with paregoric, chalk mixture, etc., can often be relieved by the simple introduction of the finger into the rectum, thereby dissipating a slight fissure. To the contrary, many men who suffer with supposed rectal trouble can have relief by having a stricture in the urethra dilated.

THERE are a number of rectal affections that give rise to prominent and often severe reflex symptoms. Among these can

be mentioned external and internal hemorrhoids, fissure, proctitis, superficial fistulæ, polypi, ulceration, etc. Whenever vague symptoms are made manifest, it is the duty of the physician to seek diligently for the starting point. Many times a grave mistake is made by treating symptoms, and not the cause. This theory, however, has been run away with lately by a set of men calling themselves *orificial* surgeons, who undertake to trace every imaginable symptom to reflexes from the rectum. It must always be understood that to have any special point as the location of reflex, that at that point there must be some morbid change. Then, too, the anatomist must bring his knowledge to bear in tracing out the nerve distribution from the same, or he can not correctly say that such was the primary cause of reflex.

Good common sense is the greatest qualification in the practice of medicine. Engraft upon this a medical and surgical knowledge of disease, and mistakes will be infrequent. If rectal trouble of a decided type exists, before operating it should be determined that disease of a more serious nature does not exist. It would be very foolish and unsurgical to operate upon a person for hemorrhoids, who also had a cancer in the upper rectum. To operate for fistula in ano in a patient who also had stricture in the rectum would do but little good if the stricture was not first attended to. The man who does rectal surgery should by all means have served his time as a general practitioner, and he certainly should be acquainted with general surgery.

In every case, then, of rectal disease of whatever nature, one should not be content with simply finding said disease, but should seek for complications. Half-way work does not do in any branch of surgery, and such character of work certainly evidences the ignorance oftentimes of the operator. The three specialties, gynecology, genito-urinary surgery, and rectal surgery, are so closely allied that frequently it will take the wise counsel of all three to determine the seat of disease. No surgeon should be so egotistical as to suppose that he knows it all, or to think that his branch is far superior to all others.

With Our Exchanges.

DISEASES OF THE RECTUM.

GANT, S. G., KANSAS CITY, MO.: TREATMENT OF STRICTURE OF THE RECTUM. (*The Medical Fortnightly.*)

In reviewing the various methods of treatment, the author writes as follows about proctotomy:

Advantages of Posterior Proctotomy. First, it permits of free drainage through the deep triangular incision; second, any hemorrhage that might occur can be easily seen and arrested; third, it allows the free discharge of accumulated feces and immediately does away with all straining, pain, diarrhea, and tenesmus; fourth, it permits of free irrigation and medication both above and below the point of constriction.

It has been my practice to perform the operation after the following manner: After the patient has been placed in the lithotomy position, with the limbs well flexed and held in position by means of a Clover's crutch, the anus and the surrounding parts are then cleansed, shaved, and the rectum is irrigated. I then select a straight probe-pointed bistoury of good length, which is placed flat upon the finger and introduced within the anus and passed upward until the constriction is felt; then the knife is thrust through it and made to pass backward until the bony structures are reached; it is then withdrawn, cutting the stricture and all intervening tissues, including the sphincter, to a point opposite the tip of the coccyx, thus making a long and deep triangular cut. If on examination it is found that all the constriction has not been severed, the incision should be repeated; ulcers are then curetted, excrescences are removed, and fistulous sinuses are laid open.

The rectum is then irrigated with a sublimate solution and the incision packed with iodoform gauze; the patient is placed in bed to have one-fourth grain of morphine at bedtime if suffering much pain. The after-treatment consists in daily flushings of the rectum with any good antiseptic or medicated solution, and the dressing is completed by the insertion of dry gauze in

the wound to prevent its healing too quickly and to assist drainage. When granulations become sluggish, the application of silver nitrate or the balsam of Peru will prove serviceable. It is necessary to pass a good-sized bougie from time to time to prevent an undesirable amount of contraction. The following will illustrate the ordinary history of a case of stricture treated by posterior proctotomy:

Case: Male, aged forty, father of a large family; history of syphilis. Had no bad habits, except that he was an inveterate smoker; several months previous to the time he came under my care he was troubled with constipation, but could obtain relief by taking large doses of castor oil and Epsom salts. Later the constipation became worse and the fecal discharges were mixed with pus, blood, and mucus. He had frequent pains in pelvis, up the back and down the limbs, his complexion was muddy, he became ill tempered and despondent. The strongest purgatives failed to give relief, except when assisted by copious injections of water and glycerine, and when the feces came away they were ribbon-like and never of natural formation. At this time the constipation began to alternate with diarrhea, and nothing was passed unless it was fluid or semi-solid. He spent a large part of his time in the closet straining, never getting any satisfaction, always feeling that the bowel had not been emptied. He was treated by a number of physicians for chronic diarrhea. He was treated for six months at one time by electricity without the slightest benefit, the symptoms in the mean time becoming more and more exaggerated until immediate obstruction was threatened. At this time I was called in consultation by the family physician. We made a digital examination, and discovered the stricture two and one half inches above the anus, which was so tight that the smallest-sized rectal bougie could not be made to pass it. By palpation we found that the sigmoid and descending colon were filled with impacted feces. I advised the operation under discussion, which met the approval of the family and the physician in attendance, and I proceeded to do the operation according to the plan just outlined.

Ulceration both above and below the stricture was curetted, and a silver solution applied; the after-treatment was carried out as previously mentioned. Three weeks from the time the opera-

tion was performed he left the hospital, but came to my office twice a week to have the bougie passed. At the end of the sixth week he went on the road as a commercial traveler, armed with a full-sized bougie, which he passed from time to time. One year from the time I operated upon him he told me that he practically had no further trouble. It is my desire to record this case because of the marked benefit derived from the operation. In the face of this good result I am free to admit that in a very large per cent. of the cases of stricture of the rectum, treated by this or other methods, short of a colotomy, such a good result will not be obtained.

EDWARDS, F. SWINFORD, LONDON, ENG.: RECTAL CANCER. (*British Medical Journal.*)

At the meeting of the Medical Society of London, Mr. Edwards showed (1) a man, aged sixty-one, who had had cancer of the rectum involving its entire lumen for four inches. On February 24th he performed left inguinal colotomy, and on March 9th he carried out coccygeal extirpation of the rectum, removing close upon five inches of the bowel. The patient left the hospital on April 15th, the bowels acting well through the artificial anus, and there had been neither prolapse nor recurrence. (2) A woman, aged fifty, who had had cancer occupying the entire circumference of the rectum for some two inches. It extended to within three inches of the anus below, and its upper limit was on a level with the middle of the sacrum. He made an incision reaching from rather above the middle of the sacrum to within an inch of the anus in the midline. The coccyx was then exposed, isolated, and removed. As the growth evidently extended to a higher level, the attachments of the sacro-sciatic ligaments on the left side were divided, and a piece of sacrum was removed. The posterior aspect of the bowel having been cleared, it was isolated about two inches above the anus, and clamped by rubber tubing and forceps, and the gut divided below. The dissection of the bowel was then carried upward. It was found necessary to freely divide the peritoneum, and ultimately the bowel was cut away and the peritoneal wound closed. The severed ends of the bowel were approximated with a Murphy's button in end-to-end anastomosis. The operation lasted over an

hour, and much blood was lost, but there was not much shock. The patient did well, and had since gained three stone in weight. The bowels acted well, but she had not much control over them. So far there had been no indications of recurrence.

Mr. Clutton remarked that Kraske's operation did not seem to be always necessary, and it was often possible to remove these carcinomata high up the rectum by another method. He himself made a free incision beside the coccyx from the anus, dividing all the tissues, opening the peritoneal cavity freely, then introducing a hand and seizing the sigmoid flexure or rectum, which was pulled down and attached to the anal margin, sweeping away the whole of the rectum from that point downward. He usually did a preliminary inguinal colotomy, in order to divert the fecal current. Kraske's operation was, he thought, particularly unnecessary in women, adding, as it did, needlessly to the shock of the intervention.

SINGER, G.: FEEDING BY THE RECTUM. (*Cent. f. de ges. Therapie*; *British Medical Journal.*)

Though the following does not come strictly within the scope of medical or surgical diseases, still it is of such importance that it is reproduced here.

It is stated that the clinical value of rectal nutrition was estab lished by Voit, Bauer, von Eichhorst, and others. Egg albumen, with or without preliminary peptonization, is absorbed and assimilated by the mucous membrane of the large intestine. For direct absorption milk is well suited. According to some, egg albumen is best when first mixed with salt (1 gram to the egg), though Ewald attaches no value to it, thinking that the peptonization is the most important. Better still is Huber's combination of the two methods: six eggs are mixed with six grams of salt, and 200 c. cm. of a 0.15 per cent. solution of HCl, containing five grams of pepsin, and the mixture is kept for ten hours in the warm chamber. Of this mixture, nutrient enemata may be given twice daily. Rectal feeding is still insufficiently employed in practice, partly because it is sometimes disagreeable, partly also, perhaps, because this method of nutrition has not quite fulfilled the somewhat exaggerated expectations at first entertained of its utility. Singer thinks that after hemorrhage from a gastric ulcer rectal

feeding should be resorted to for some days. It diminishes the likelihood of a recurrence of the hemorrhage by doing away with the irritation caused by the presence of food, and by giving the stomach physiological rest, with freedom from the peristalsis and hyperemia accompanying digestion; it is at the same time a treatment for the troublesome vomiting of gastric ulcer, with or without hemorrhage. The nutrient enema should not consist of more than a quarter of a liter. Singer has practically kept to the mixture recommended by Boas, and uses 125 grams milk, 125 grams wine, the yolk of two eggs, mixed with a little salt and a teaspoonful of Witte's peptone; he sometimes adds a little grape sugar. The mixture is well beaten up, and an ordinary enema syringe furnished with a soft tube is used to inject it. The nutrient enema may be given three or four times daily at intervals of four to five hours. The rectum must be cleaned out with enemata before each nutrient enema is given, and neglect of this precaution is a common cause of symptoms of rectal irritation. Singer recommends after each nutrient enema the administration of a suppository containing $\frac{1.5}{100}$ grain of extract of opium; when there is great tendency to tenesmus, eight to ten drops of tincture of opium with the other ingredients of the enema. It is very seldom that the enemata are not retained, but in this case the preparation of the mixture may be at fault; there may be too much salt, or an unsuitable ready-made peptone preparation may have been used. The patients with hemorrhage from gastric ulcer were kept in bed and nourished solely by the rectum for four to eight days. Singer says that recurrence of the hemorrhage took place only when patients secretly took solid food before they were allowed. When there is much pain a mixture containing subnitrate of bismuth and chloroform can be given by the mouth. Excessive feeling of hunger and thirst can be treated by a little opium (better than cocain), and 200 c. cm. of water (for thirst), but if the thirst be excessive, owing to diarrhea, more fluid may be given. Singer also recommends exclusive rectal feeding to be tried in some cases of dilatation of the stomach, in some gastric neuroses including excessive vomiting of pregnancy, and after some abdominal operations. In cases of typhoid fever he thinks that he has diminished the great loss of weight by feeding patients by the rectum, in addition to

the ordinary feeding by the mouth. Enemata containing alcohol and tea may be useful in collapse during acute diseases, and where alcohol can not well be administered by the mouth.

MONCHET, ALBERT: POLYPUS OF THE RECTUM. (*Annals of Gynecology and Pediatry.*)

The tumor was presented to the Societé Anatomique de Paris. It was expelled during defecation by a twenty-two-year-old girl that was under the reporter's father's care. It was about the size of a small orange, round in shape, the surface dimpled. Microscopic examination showed the growth to be an adenoma. In each section the general aspect was that of a bouquet, a central stem supporting a multitude of ramifications forming alveolæ by their intermingling. The stem was made up of connective tissue enclosing a few connective tissue cells, but especially slightly undulated connective tissue fibers, in the midst of which we thought that we could recognize the long nuclei of muscular fibers. The alveolar body is made up of thin tracts of connective tissue, containing here and there embryonal cells, and quite vascular. In the deep parts, especially in the neighborhood of the central stem, the alveolæ are occupied by glandular cul-de-sacs, cut perpendicularly or more or less obliquely. The epithelium of these cul-de-sacs is that of the normal cylindrical type, but without showing any tendency to proliferate into the glandular cavities. The latter, retracted probably by the alcohol, have hardly any cavity. At the periphery, an embryonal layer of infiltration is seen, with occasional capillary dilatations and glandular cavities, some opening at the surface, like Lieberkuhn's glands. At the surface of the tumor a poorly colored, amorphous zone is perceived.

The following notes are those made by the writer's father:

Miss X. menstruated regularly and was perfectly well up to nineteen months ago, when various hysterical symptoms appeared, left hemianesthesia, diminution of the visual field, pharyngeal anesthesia, troubles of the digestion and obstinate constipation. The patient complained constantly of a pain in the left iliac fossa, which was attributed to neuralgia of the ovary. She remained in bed for fourteen months, and only commenced to improve during the past five months. The abdominal

pains increased at the time of constipation, which was most disagreeable. Several times the patient thought that the feces pushed something down before them, like a bunch of hemorrhoids, which returned spontaneously after they had been expulsed. One day while at stool, after many efforts, she cried out, saying, "Something has come away from my body," and at the same time a jet of blood covered the bed. A fleshy mass was found adherent to the rectum by a pedicle, and easily recognized as a polypus of the rectum inserted at the posterior wall, which was protruding. Around the polypus were grouped a quantity of sessile polypoid granulations. The pedicle was ligated and the other small polypi were removed with the scissors and nail. Reduction of rectum after irrigation with a solution of carbolic acid. Recovery rapid; the constipation and abdominal pains quickly disappeared.

WOOD: STRICTURE OF THE RECTUM. (*Brooklyn Medical Journal.*)

At a meeting of the Brooklyn Surgical Society, Dr. Wood presented a patient who had been under several major operations, all of which had been done by Dr. Fowler at St. Mary's Hospital. She was first seen in the summer of 1892. At that time she was very thin and suffering from a well marked stricture of the rectum. She was married and thirty-three years of age. She said the rectum had been troubling her more or less for five years, but the symptoms of obstruction were of short duration. Previously she had had a mucoid and bloody discharge. She denied all syphilitic history; an examination failed to show syphilis. There was, however, a history of sodomy. She was kept for six weeks on iodide of potassium in as large doses as the stomach would stand, with no improvement. At that time the stricture in the rectum would admit a bougie of about the size of the No. 20 French urethral instrument. A right inguinal colotomy was done. After six or eight weeks, during which time we had attempted to dilate the rectum but without success, a resection of the rectum was done, according to the older method, through a linear incision. The stricture was excised; its appearance seemed to be malignant.

A microscopic examination was made, but the report could not

be found. She recovered from the rectal operation and gained in health and strength and left the hospital. Some eight months after she again came to the hospital, being very desirous of having the colotomy wound closed. At that time there was no recurrence of any symptom in the rectum. The mucous membrane and the skin had healed fairly well, and she had very good control of the intestinal contents except when she was suffering from diarrhea. At her earnest request an attempt was made to close the opening in the abdomen. A complete end-to-end anastomosis was made. She recovered from this operation and left the hospital last October. One would scarcely have recognized her, for she weighs at least a third more.

The etiology of rectal stricture is of great interest. He did not think that this was a case of malignant disease of the rectum that has been cured by excision, though that is possibly true, but thought the stricture was of a simple nature and caused by sodomy.

There has been something written on this subject this year. Duplay has been attempting to prove that so-called specific strictures of the rectum, where we do not find other evidence of this disease, have been wrongly laid to syphilis as a cause, and that they are a chronic inflammatory condition resulting from traumatism, dysentery, and not infrequently from unnatural sexual practice.

Coston, H. R., Fayettesville, Tenn.: The Treatment of Hemorrhoids. (*Virginia Medical Monthly.*)

In support of my position that the use of the clamp and cautery is the operation *par excellence* for this disease, I wish to quote only one more authority, viz., Henry Smith, Assistant Surgeon King's College Hospital. He says (Holmes' *Sys. Surgery*, Vol. II, page 635): "I have now performed this operation in upward of two hundred cases, and I can with truth state that if it be properly done there is hardly an element of danger in it. I have operated at all ages from puberty up to nearly eighty, and in instances of the utmost severity, in cases where the tumors have been immense, and when the patients have been so thoroughly blanched by long-continued bleeding that one would not dare to perform any operation unless convinced

of its absolute safety. I have not met with a single instance where secondary hemorrhage has followed either the operation for hemorrhoids or prolapsus."

Having seen the operation with the clamp and cautery performed many times, and having done the operation myself with perfect success, and having weighed the arguments of the authors cited above, I deduce the following *conclusions in favor of the clamp and cautery* in preference to the ligature in the treatment of piles:

1st. It is more certain in its results.

2d. There is less danger of secondary hemorrhage.

3d. There is much less pain suffered by the patient during convalescence.

4th. Convalescence is much more quickly completed.

5th. There is no danger of a recurrence of the disease.

6th. There is no mortality connected with the operation.

I will now describe the operation as briefly as possible. The instruments necessary are: A good thermo-cautery apparatus (I use the Farny), a Kelsey or Smith pile clamp, a double tenaculum, and a pair of scissors.

Have your patient's bowels thoroughly empty by the use of salines and large enemata. Anesthetize your patient and place in the extreme lithotomy position; distend the sphincter ani with your thumbs introduced back to back; this turns the piles out. Now grasp each tumor with your tenaculum, drawing it well down, and if the skin is involved make an incision at the mucocutaneous junction; then grasp the pedicle of the tumor with your clamp and burn the tumor away with the cautery heated to a dull red heat. If the tumor is large it saves time to cut away the greater portion, only leaving sufficient stump for the thorough application of the cautery. If the skin is not involved it is useless to make an incision at the base of the tumor. The clamp should be slowly unscrewed and removed, following it carefully with the cautery, being careful not to disturb the eschar produced. Treat each tumor in like manner.

The after-treatment is practically nil.

GASTRO-INTESTINAL DISEASE.

COYLE, JOHN G., NEW YORK CITY: PSEUDO-MEMBRANOUS ENTERITIS. (*American Medico-Surgical Bulletin.*)

Membranous enteritis has been written about by many authors. The examination of their writings discloses a wide divergence of opinion regarding the category in which the disease should be placed, some regarding it as a distinct disease and others holding that it is a symptom of general gastro-intestinal derangement. This difference of opinion stamps it as a more or less obscure disease, elusive of close observation, and such in my opinion it is. Modern authors, however, unite in recognizing the affection as a disease by itself, and give it a place in every system of medicine.

Etiology. It occurs almost exclusively in women between the ages of thirty and forty-five, very rarely in men, and hardly ever in children. The subjects attacked are generally nervous, excitable, or hypochondriacal. Whitehead noted that many of the women had flaxen hair and light complexions.

Symptoms. The chief symptoms are the discharge at irregular intervals and for varying lengths of time of membranous exudations from the bowels, preceded by loss of appetite, gastric disturbances, mental depression and great lassitude, and accompanied by severe pains located in the colon and by lack of febrile excitement.

Were these the only symptoms the diagnosis would be exceeding simple; but as a rule the patients have suffered for so long a period with symptoms of fermentative dyspepsia or gastro-intestinal indigestion of apparently commonplace type and the physician has directed his treatment to these prominent symptoms so unremittingly that they have masked their real origin, which was the gradual formation of an exudation of membranous character upon the mucous membrane of the large intestine.

At the time of the attack, during which the exudations are cast off and appear in the dejecta, the pain may be constant and severe, or it may be intermittent, like that of an ordinary gripe, or it may amount only to a feeling of rawness along the line of the ascending colon. Frequently the pain precedes the discharge

of membranous exudates for from ten days to two weeks, during which time the dejecta are normal in appearance and composition.

The menstrual function is frequently disturbed. In the case herewith reported the menstrual flow had, on two occasions long separated in time and not coincident with the discharge of enteric membrane, contained small but numerous pieces of reticulated membrane unaccompanied by clots.

The Membrane. The formation of a false membrane anywhere in the body is a curious phenomenon which is of unfailing interest to the clinician and the pathologist alike. Owing to the location of this disease it is impossible to study the processes of the formation of this curious pathological product, enteric membrane. It can not be removed except by the processes of nature; and hence we are compelled to confine our observations upon it to the remains of it found in the dejecta.

The membrane as it appears in the feces is always accompanied by some of the intestinal mucus, which appears in stringy pieces, like the product of laryngeal catarrh or in more or less solid plugs.

In the process of dislodgment the pseudo-membrane is torn or broken into pieces of various sizes, from that of a pinhead to huge masses several inches in length and of considerable weight. In one case, reported in France in 1855, the exudates weighed *en masse* three kilograms. In another case, reported by the same author, the membranes were longer than the patient. In my own case there was one piece six and a half inches in length and an ounce and a half in weight. The larger pieces frequently exhibit the tubular form of the bowels. Distinctly annular portions of this membrane will always be found in the passages occurring during the early period of the attack. The membrane varies in consistency from extreme softness to a firmness equal to a vaccination crust.

Microscopically the membrane generally presents a reticulated surface upon the side farthest away from the intestinal mucous membrane. The surface which rests upon the mucosa of the intestinal tube is broken and rough, presenting many inequalities. The membrane is essentially and almost entirely mucin, and its laminated structure shows that it is not the result

of continual or steady exudation, but that from time to time the exudative process ceases for an unknown period. When this process is again resumed, whatever happens to be on the then surface is entrapped and imprisoned between that surface and the new layer of mucin. Thus we find small fragments of undigested food; I have found pieces of an apple entirely unchanged, indigestible substances, such as fig-seeds, minute fecal fragments and small granules of unrecognizable character.

No fibrin is found in these membranes, and herein lies the vital difference between the products of this disease and those of other diseases of the intestines, accompanied by membranous formations, more especially intestinal diphtheria, that rare and horrible disease.

Strange Features. The disease is remarkable in that despite the undoubted fact that it is the severe inflammation of the intestinal mucous membrane that produces and discharges the false membrane, there is scarcely any temperature except what will ordinarily occur from easily assignable causes, such as anorexia, worry, and loss of sleep.

Again, it is on record that patients with this disease have passed yards of membrane of such length and size as to fill a chamber vessel and to be mistaken for a gigantic tapeworm; yet such cases have been able to resume their ordinary occupations in a few hours after such an occurrence.

Differential Diagnosis. During the period preceding the formation or discharge of the membranes this disease may simulate simple fermentative dyspepsia or intestinal indigestion. It can not be differentiated from either of these until the acute pain comes on, when an examination of the stools will, in the majority of cases, at once reveal the nature of the disease. As the pain in some cases is located at the site where the soreness in appendicitis develops, it might perhaps be mistaken for that disease; but the apyrexia and absence of vomiting would soon settle the question. From diphtheritic inflammation of the intestinal canal it can be distinguished by the absence of diphtheria elsewhere, and the absence of fibrin in the membranes.

Prognosis. The disease is chronic. It can not be cured. There will be intervals of good health in some cases, but generally the disease once developed produces permanent derange-

ment of the functions of the intestinal canal which makes the patient susceptible to attacks upon slight causes. An acute attack of pain and membranous diarrhea, lasting one day, was caused in my patient by eating a piece of raw apple when the person appeared to be in good health. The attack ended only when the apple was passed undigested, but very much hardened.

The disease lasts for years, the longest recorded case enduring for fifteen and the shortest for three years.

Treatment. During the acute attacks the best treatment is liquid food, or very light diet, excluding meat, adding digestives if necessary, and saline enemata of warm or cold water, preferably cold, with morphine internally to relieve pain. Counter-irritation for pain is useless. The strength of the enemata may be varied from two drams to an ounce of borax, bicarbonate of soda, or salt to the quart of water. Enemata should be given night and morning anyhow, and repeated whenever the patient feels a desire for movement of the bowels. These enemata serve to cleanse the rectum thoroughly of shreds and mucus and prevent the accumulation of foreign matter and diarrhea, which will occur if the rectum is not washed out. A purge, preferably a saline, should be given at the commencement of an acute attack. The watery movement caused by a saline purge assists in detaching the membrane, and relief soon follows. The citrate of magnesia, Rochelle salts, or the always reliable sulphate of magnesia may be employed for this purpose. Heat to the abdomen for relief of the pain is of little use. It may serve to impress the patient that something potent is being done for her, and, as these cases are generally impressionable women, moral effects must not be lost sight of. Rest in bed and quiet in addition to the above measures will shorten the acute attack.

In the intervals between the attacks the diet must be restricted to those substances which give the patient no disturbances of digestion. Laxatives for the bowels, especially cascara in small doses, digestives, such as pepsin and pancreatin, whenever they appear to be necessary, and tonics for improvement of the general health constitute the only efficient means at our command to render life endurable for these cases. In spite of all treatment the patient will from time to time suffer from fermentation in the stomach. Sulphite of sodium in from 5 to 10

grain doses after meals does more for this annoying symptom than any thing else. With our present knowledge the disease must be classed as one of the chronic incurable diseases that do not furnish much comfort to the medical attendant except as affording an opportunity for experimental therapeutics.

LIEBMANN, GUSTAV, BOSTON, MASS.: THE STOMACH TEST IN MURDER TRIALS. (*Boston Medical and Surgical Journal.*)

The object of this test is to ascertain by the presence or absence of solid contents or by the intermediary stages of liquefaction of food found in the stomach how far the process of digestion had advanced, giving thus a clew as to the time at which death of the victim had taken place, provided the time of the last meal be known. In order to arrive at an exact, or at least approximately exact, conclusion, the first and imperative condition would be a uniformly established and acknowledged schedule of time in which the different phases of digestion should be completed. If there be such a physiological law, from which there is practically no deviation, we should place full reliance upon the test; but if there be, in healthy people even, numerous exceptions or deviations, the test must of necessity be open to errors. Now I hold that this latter proposition is the true one. The food does not drop out of the stomach with the regularity of the shot that drops out of the cylinder in the new Connecticut hanging-machine. To be sure, in a good many cases it is disposed of in from four to five hours after eating, the time set down in the text-books as necessary for the completion of the digestive process. But, as a matter of fact, in almost quite as many other cases this term is exceeded by two to three hours; so that Leube, for instance, in order to determine the duration of digestion, never takes out the stomach contents before seven hours after the test-meal.

The different variations in the duration of the digestive process depend upon the following conditions:

1. The length of time necessary for the transformation of solids into chyme in healthy individuals varies a great deal, according to the digestibility of the different foods.

2. The length of time necessary to expel the ingesta from the stomach into the duodenum in the healthy individual varies

according to the quantities of food taken. Not only does it take a longer time for larger quantities to be impelled on, but the motor activity of the stomach walls is diminished by the greater distension produced by the larger amount of food. Thus, pieces of meat are frequently found a day or longer after eating.

3. The shorter or longer stay of food depends on the amount of acidity, which varies in different stomachs even within the border-lines of health.

4. Much variation, even in health, is caused by individuality, by presence or absence of pepsin, hydrochloric acid, psychical factors, emotions (fright, fear, grief, or the opposite, as joy or exultation).

We see, therefore, that owing to the many physiological variations which do not permit of any reliable deductions even in the healthy, the forensic value of this test must be considerably impaired. To be sure, if we had a perfectly safe and reliable standard of time, at the end of which digestion is completed and during the different phases of which certain changes of a physical and chemical nature must have been wrought with the accuracy of a clock, then indeed the test would be a reliable one. But, as we have shown, we meet with so many considerable variations (in some individuals the stomach is empty four or five hours after a test-meal, in others, only after eight or more hours), that a uniform standard time for the completion of digestion is out of the question. And, if this be so within the border-line of health, how much greater must these variations be in the dyspeptic; and yet, when the test is made, is there any attention paid to the possible diseased condition of the stomach? Not to my knowledge. And yet the chances are that, by reason of an atony of the stomach walls, of a chronic glandular gastritis or of a dilatation of the viscus, the food has remained far too long in the stomach, and that the examiner will fix the occurrence of death, in accordance with the tardy progress of digestion, at an entirely too early a time.

On the other hand, there are stomachs which, in case their motive functions are unduly increased, expel their contents in an exceptionally short time—to the detriment of their possessors at that. And here the possibility arises, that the test might lead us astray in the opposite direction, in that the time of death

would be fixed at a later time than warranted by the facts. The stomach is found empty; therefore the time of death is put down as having occurred at least five hours after the last meal, while in point of fact the emptying of the organ might have been complete three hours after that meal. To be sure, such cases are not the rule, but they are on record, and should be reckoned with.

From the foregoing it would therefore appear that this so-called stomach test, as applied at present to determine the time of death of the victim, is not alone inexact, but that there is even a great question whether it is approximately correct.

Burdick, G. G., Chicago: Duodenal Ulcer—Perforation—Death. (*The North American Practitioner.*)

Miss M. J., aged twenty-two, domestic, never had any previous illness except measles about a year ago. While at her work carrying a supper tray, five days before her death, a most excruciating pain was felt beneath the border of the ribs on the right side. She instantly fainted and remained unconscious for some time. A physician was called who diagnosed the case to be neuralgia of the stomach, and administered morphine hypodermically several times a day for the next four days. When I first saw her (on the fourth day), October 20, 1894, she was stupid from the morphine; pupils contracted; pulse 140, soft and very compressible; temperature 102° F.; respiration 32; tongue dry; skin dry; nausea but no vomiting, and her bowels moved freely that day. Even with the influence of the drug, pain was complained of, but it was referred to the left of the umbilicus. A physical examination presented a swollen abdomen especially in the right hypochondriac region, which was dull on percussion and painful on pressure. As the influence of the morphine was allowed to wear off, her sufferings became more manifest, the face assumed a marked anxious expression, the respirations were circumscribed, the temperature arose to 103° F., and general restlessness ensued. An immediate operation was recommended for what I deemed to be an abscess, probably hepatic in character; but while arrangements were being made for her removal to the hospital sudden collapse, thready pulse, subnormal temperature, profuse cold perspiration, etc., came on and terminated in death in five hours. The restoratives, nitroglycerine, strychnia, digitalis, etc., had no effect whatever.

Post-mortem was made in presence of Drs. Flemming, Ferguson and Eiss. Upon opening the abdomen in the median line a large amount of sanio-purulent fluid (fully six pints) was removed with an ordinary teacup before the affected parts could be examined. There was unmistakable evidence of extensive peritonitis over the anterior surface of omentum and stomach, and the peritoneum covering the under surface of the liver and parieties on the right side, which was undoubtedly the seat of a large abscess before its rupture into the general peritoneal cavity. This was easily demonstrated. It was more difficult, however, to find the source of infection. The oft-offending organ, the vermiform appendix, was first looked at, and found all right; the gall-bladder was found intact, and the stomach was not found to be at fault. After a careful search was instituted the ulcer in the duodenum was found. It was situated within half an inch of the pylorus at the upper and posterior aspect of the gut. There was only one, and it presented all the pathological appearances of the round gastric ulcer; it was large enough to admit the tip of the index finger.

Remarks. It is uncommon for a duodenal ulcer to perforate, as this one did, without a history of some previous disturbance. In this, however, her friends may have been mistaken, and we do encounter some people who bear considerable suffering without a murmur. Even if an early diagnosis had been made and an operation done, I doubt very much, from the concealed situation of the ulcer, that it would have been found, and later, after the abscess was fully formed, it is extremely doubtful, judging from the extended area and diffusing nature of the abscess, that its evacuation would have been of any avail.

August, Albert: Recurrent Appendicitis. (*Boston Medical and Surgical Journal.*)

The author concludes as follows: I would say that it does not seem to me possible to lay down any definite rules as to when the operation should be done, but that each case should be considered separately. It seems to me that if it were possible to carry a patient through the acute stage without operation, it should be done, since the operation in the interval by a skillful surgeon carries with it such a small mortality, and the abdominal wound can be sewed up tight, therefore minimizing the danger of subsequent hernia.

Book Reviews.

System of Surgery. Edited by FREDERIC S. DENNIS, M. D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College; President of the American Surgical Society, Graduate of the Royal College of Surgeons, London, etc. Assisted by JOHN S. BILLINGS, M. D. Philadelphia: Lea Brothers & Company, publishers.

It must be admitted that surgery has been revolutionized in the last few years. What was surgery twenty years ago is not surgery to-day. Indeed so closely is the line drawn that a well-founded malpractice suit could be brought to-day, and sustained by the courts, if the surgery of twenty years ago were practiced to-day. This System of Surgery edited by Dr. Dennis can be called modern in all respects. In other words, it is up to date according to the most modern research. From time immemorial the American profession in medicine has looked to foreign authors to supply it with works on surgery. It is evidenced by this great work that no such need exists at the present day.

This System of Surgery is edited in its entirety by distinguished Americans. Among the list are to be found the names of such great authorities as John S. Billings, William T. Councilman, William H. Welch, Charles B. Nancrede, William H. Carmalt, J. Collins Warren, Hermann M. Biggs, Phineas S. Conner, Frederic S. Dennis, Horatio C. Wood, Arpad G. Gerster, and Stephen Smith. Such an array of talent is seldom gotten together, even in our great encyclopedias. There is no superfluous matter in the book. Every thing is concisely and well written. From the introductory chapter on the History and Literature of Surgery to the last chapter on Operative Surgery, the interest of any painstaking surgeon is kept intent. The practical part of the work is not sacrificed to the theoretical. What is known of the part that micro-organisms play in surgery is concisely stated and to the point. Yet when one reads the chapter on inflammation, for instance, he is not at a loss to understand the structural changes that take place, or the actual pathology that exists. It might be said that this work is a thoroughly practical one, suited as well to the practitioner of medicine as it is to the teacher of

surgery. Each editor writes as a master, and it is not devolved upon one man to write chapters which might be considered diverse in sentiment. For instance, Dr. Wood brings to bear his vast experience in writing the chapter on anesthetics, and Dr. Billings draws from his wonderful store of knowledge in writing of the history and literature of surgery.

The day has passed when a physician's library can be called complete when it has in it books only that were edited twenty years ago. It is necessary, in order to be posted even in the ordinary practice of surgery, to have and read books that are fully up to date. So vast have been the changes that one would not be accounted even a second-rate surgeon who did not keep abreast of the times. No half-way impressions will do to-day, no staying on the fence, as it were, but surgeons must have positive opinions and be able to maintain them. To all having a desire to be so in line we would recommend the purchase of this valuable book of surgery.

Surgical Pathology and Therapeutics. By JOHN COLLINS WARREN, M. D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts Hospital. Philadelphia: W. B. Saunders, publisher. 1895.

This admirable book should be hailed with delight. If there ever was a want needed to be supplied it is in a work on surgical pathology, written according to well-established facts of modern research. There is no surgeon especially, nor physician, but has felt the necessity of the same. We all look with reverence upon the works of Billroth, Paget, Green, etc., but we fully recognize that the pathology included in their works was based upon a false premise and is revolutionized to-day. The student of medicine must be informed of the fact that unless he understands the principles of bacteriology he can never successfully understand the first principles of pathology. It might be said that this work by the eminent author, takes up the work where it was left off by the distinguished men that are mentioned. By glancing over the contents this statement is verified. For instance, the first chapter is devoted to the subject of bacteriology, and the second to surgical bacteria. Such chapters were unknown to all works on surgical pathology a decade or two ago. Nevertheless they are the very foundation of all pathological change to-day. Without the recognition of this fact no teacher would be considered con-

versant with disease to-day, nor no practitioner of medicine competent to prescribe for the sick or do up a wound.

These principles are prominently set forth in Chapters 6, 7, and 8, where the word "infected" plays such a prominent part. These are devoted to the subject of inflammation, the very groundwork of all pathological change.

The subject of tuberculosis is fully discussed in Chapter 26 from the same standpoint. Indeed, running through the whole book, the modern idea as regards the origin of disease is made manifest. The work is written in a clear and concise style and is beautifully illustrated.

Compared to former works on the same subject it is like comparing an electric light to a tallow candle. Nothing in it is argumentative, but facts are given plainly and no room is given for doubt. Taken all in all it is one of the most valuable works contributed to medical literature in the last half century. No one pretending to be posted in surgical pathology can afford to do without it. The publishers deserve great credit for the handsome style in which it appears and the low price at which they offer it for sale. It can be obtained by subscription only, for six dollars in cloth, seven dollars in one half morocco.

A Manual of the Modern Technique of Surgical Asepsis. By Carl Beck, M. D., Visiting Surgeon to St. Mark's Hospital, and to the German Polyclinic, New York City, etc. Philadelphia: W. B. Saunders, publisher.

In this day and generation there are apt to be launched many books upon the profession detailing the aseptic and antiseptic treatment of wounds. Among the list that has already appeared there is none so valuable as this book edited by Dr. Beck. It is what it claims to be, a manual of surgical asepsis, suited both as a text-book in our medical schools, and to the busy practitioner, either in city or country practice. The book is a thoroughly practical one, so much so that any first course medical student can understand every sentence in it and be benefited by its application. The author has established a line of demarkation, as it were, between wounds dressed aseptically and antiseptically. This is in recognition of the most modern view on this subject, as all surgeons recognize that all wounds made upon a septic subject must be dressed antiseptically. Indeed, so hard it is to get perfect asepsis, that it were well if all authors would impress the

necessity of using antisepsis in order to obtain an aseptic condition. We are pleased to note that the author places iodoform at the head of the list of antiseptic drugs. As he well says, no other has ever yet been mentioned that can take its place. The chapter given to microbes, or micro-organisms, is more complete than we could reasonably expect in so small a volume.

The most important chapter in the book is that of means of disinfection. No physician, be he ever so obscure, but could perfect himself in this branch after reading this chapter. The description of aseptic open wound treatment is thorough and complete. It will meet the approbation of all discerning surgeons. Going along in line is a chapter devoted to anesthesia. It is not at all out of place in a volume like this. Every practitioner will profit by reading the same. It is well worth the price of the book, which is only one dollar and twenty-five cents, to become familiar with the last chapter, which is on asepsis in private practice. In a word, this is a most valuable book.

Suggestive Therapeutics in Psychopathia Sexualis; with Especial Reference to Contrary Sexual Instinct. By Dr. A. von Schrenck-Notzing (Munich, Germany). Authorized translation from the German by Charles Gilbert Chaddock, M. D., Professor of Diseases of the Nervous System, Marion-Sims College of Medicine, St. Louis; member of the American Medico-Psychological Association; Attending Neurologist to the Rebekah Hospital, St. Louis, Mo., etc. One volume, royal octavo, 325 pp. Extra cloth, $2.50 net; sheep, $3.50 net. Sold only by subscription to the medical profession exclusively. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry Street.

The title of this book does not, as the author says in the preface, correspond exactly with its contents. Yet it can be seen at a glance that such a work at this time is very timely. The class of patients of which this book treats is not only a much neglected one, but one that should receive our greatest sympathy and careful study. Left alone they often end their days in an insane asylum, when, as the author suggests, by early and proper treatment they could be rescued. Although upon a subject but little understood by the medical profession, perhaps from want of careful observation, the book should be welcomed into every library and be read upon its merits. Whereas many might object to the methods of hypnosis as recommended and practiced by the author, it is but fair to give him credit for his decided candor. If we

would turn aside for a time from the every-day cases that occupy our minds and investigate those of more obscure origin, as the ones detailed in this book, a much neglected class would be benefited. Whereas there is much in the book that appears mysterious and perhaps unfounded to the general reader, yet a careful survey and study of the subject-matter might enlighten us. Every physician would be the better off and possess a wider knowledge of a very intricate subject by being the possessor of this book.

Materia Medica and Therapeutics for Physicians and Students. By JOHN B. BIDDLE, M. D. Revised and enlarged by CLEMENT BIDDLE, M. D., U. S. Navy. Philadelphia: P. Blakiston, Son & Co. 1895.

Biddle's Materia Medica and Therapeutics has so long been a standard work that a mention of the changes made by the editor in the previous work will suffice for a review. This work was written and issued first in 1865, and between this date and 1879 eight editions were issued, the author dying during this year. This, the thirteenth edition, includes all the articles and preparations considered in the U. S. Pharmacopeia of 1890, and to do this seventy-eight additions of official preparations have been made, and thirty have been added to the unofficial list, and seventy-two have been dropped from the list altogether. In the appendix a dietary list for the sick is to be found, also a table of doses for adults, arranged in both apothecary and metric system of weights. Although the metric system was adopted in the last edition of the dispensatory, the general adoption of it is very slow, and we doubt if it will be generally used for many years.

The general arrangement of the work is as these works are as a rule, the various groups of drugs being arranged together. For teaching purposes this is very good, but as a work of reference it can not compare to the alphabetical arrangement of the drugs.

Clinical Gynecology, Medical and Surgical. For Students and Practitioners. By Eminent American Teachers. Edited by JOHN M. KEATING, M. D., LL. D., and by HENRY C. COE, M. D., M.R.C.S. Illustrated. Philadelphia: J. B. Lippincott Company. 1895.

It is greatly to be regretted that the able editor of this work, Dr. John M. Keating, should have been taken off before the completion of his work, but in the selection of his successor, Dr. H. C. Coe, the publishers made a most wise one, for as a teacher, writer, and practitioner he is recognized by all as an authority. The

work is essentially a Clinical Gynecology, for the articles written by eminent specialists are all such as the busy practitioner, the specialist, and the student will be able to gain much that is of practical benefit to him.

Not only was the editor who began the work unable to live to see the results of it, but the writer of the introductory, that eminent and gifted Dr. Goodell, died before the volume was issued.

There is little to be said of the book but words of praise, it is so complete in all particulars. We would like to have seen, however, in the table of contents after the names of the contributors, the positions which they hold, their various hospital appointments, etc.

Surgical Nursing. By BERTHA M. VOSWINKEL, Nurse in Charge of Children's Hospital, Columbus, Ohio. With one hundred and eleven illustrations. Philadelphia: P. Blakiston, Son & Co. 1895.

This is a very neat little work, and one for which there is a demand. It seems too bad that in one of the most important parts of the book errors should have been made in the proof reading, "one drachm" being used in the description of the preparation of antiseptic solutions, instead of "three drachms." On pages 161 and 162 there are mistakes of like nature, which, perhaps, might be overlooked by one using the book as one of reference. We are surprised too that catheterization by touch in the female should be recommended in any surgical work, an operation of all others in which strict asepsis if not antisepsis should be used, and this is impossible to observe unless the meatus be exposed to view.

The arrangement of the text is to be commended, especially the marginal notes, which are an aid to the student. The illustrations are well chosen and arranged. The price of the work is one dollar.

A System of Legal Medicine. By ALLAN MCLANE HAMILTON, M. D., and LAWRENCE GODKIN, ESQ. Illustrated. Volume II. New York: E. B. Treat. 1894.

Among the collaborators to the second volume may be mentioned Simeon E. Baldwin, of the Supreme Court of Connecticut; Drs. C. L. Dana, George R. Fowler, Andrew F. Currier, Allan McLane Hamilton, Charles Jewett, Philip Knapp, Charles K. Mills, B. Sachs, George DeForest Smith, and Frederick R. Sturgis.

The very important subject of the Duties and Responsibilities of Medical Experts is very fully treated of by Mr. Hornblower, and a subject which perhaps causes more worry than most others in this class of cases is traumatic neuroses; few cases can be of more trouble and worry to the physician than the malingerers who try to gain damages after being hurt in some accident, and this article by Dr. Dana will be of great service in enabling those who may meet with such cases to arrive at a differential diagnosis. In this same connection may be mentioned the article by Dr. John E. Parsons on Mental Distress as an Element of Damage in Cases to Recover for Personal Injuries. The article by Dr. Currier on Birth, Sex, Pregnancy, and Delivery is an excellent one. The work has much to commend in it.

Hand-book of Dermatology. By A. H. Ohmann-Dumesnil, A. M., M. D., St. Louis, Mo. Second edition, revised and enlarged. Illustrated with fifty original full-page plates and numerous engravings in the text. St. Louis: Quarterly Atlas Co. 1894.

The author does not intend this to be considered a text-book of dermatology, but as the name implies is a hand-book, a book of reference, and as such it answers the purpose admirably. The illustrations are well chosen and for the most part are the same as appeared in the current numbers of the Quarterly Atlas of Dermatology, of which the author of the work under consideration is the editor. The following are his classifications: Disorders of Secretion and Excretion; Hyperemias; Inflammations; Hemorrhages; Hypertrophies; Atrophies; New Growths; Neuroses; Parasites. The book closes with a formulary including all of the recognized standard drugs and their combinations used in the treatment of diseases of the skin.

Transactions of the Antiseptic Club. Reported by Albert Abrams, a member of the San Francisco Medical Profession. New York: E. B. Treat. 1895.

We fail to see the reason for the publication of such a book, for it is utterly devoid of fun and interest, the jokes are extremely far-fetched, and few are new or worth remembering. It is true there is plenty of sarcasm in the book, but it attacks principles which are essential to the practice of surgery, and we are sorry to say in a way which certainly can not accomplish the purpose for which the book was written.

Kola Illustrated. Monograph, 28 pp. Johnson & Johnson, New York, publishers. Lotus Press Print.

A handsome brochure containing a score of illustrations, one colored plate to give a full and entertaining description of West India Kola, also the physiological action of Kola, comparative action of Caffein, Kola, and Kolanin; reports of action of Kola in aiding muscular effort, marching of troops, bicycle riding, mountain climbing, athletic training.

The publisher's preface says: "The interest shown by the medical profession in our studies of Kola has exhausted two very large editions of our monograph, Kola Illustrated. This brochure (the third issued by us) has been prepared especially for the busy physician. It contains a summary of present information regarding this valuable drug."

Diet Lists and Sick-Room Dietary. Compiled by JEROME B. THOMAS, A. B., M. D., Assistant Bacteriologist to the Brooklyn Health Department. Philadelphia: W. B. Saunders. 1895.

The title of this book is self-explanatory. It is a book of detachable diet lists for albuminuria, anemia, and debility, constipation, diabetes, diarrhea, dyspepsia, fevers, gout or uric-acid diathesis, obesity, tuberculosis, and a sick-room dietary.

In the words of the author's preface, "If all nurses were practical cooks, and all patients could afford nurses, the sick-room dietary would be superfluous," all of which is very true, and as this is not the case, we believe this excellent series of lists will meet with the reception it deserves by the profession.

The International Medical Annual and Practitioner's Index. New York: E. B. Treat. 1895.

This is the thirteenth year of this publication, and the volume issued is up to the usual excellence of its predecessors. It is impossible for one to attempt to review a work with so great a scope as the one before us, but as we glance through it we are impressed with the excellence of a few of the special articles, namely, Albuminuria; Anchylostomiasis; Angio-neurosis; Defective Hearing; Intestinal Surgery; Paralysis, an excellent article by Drs. Robert Jones and John Ridlon; Seminal Vesiculitis. We are surprised that no mention is made in so recent a review of the antitoxin treatment of diphtheria.

Medicine. A Monthly Journal of Medicine and Surgery. Edited by Harold N. Moyer, M. D.

This is a new journal which is to be published by George S. Davis, Detroit. The first issue contains sixty-four pages of reading-matter, with six original articles. We hope there is a field for a new monthly journal such as this bids fair to be, and we trust that under the able editorship of Dr. Moyer it will take a place in the front rank of monthly periodicals.

The Therapeutical Applications of Peroxide of Hydrogen, Glycozone, and Hydrozone. By Charles Marchand, Chemist. Ninth edition.

This book of two hundred pages, which contains all information on the subject, with reprints of elaborate articles by leading contributors to medical literature, will be mailed free of charge to doctors mentioning this publication. Send full address to Charles Marchand, 28 Prince Street, New York.

International Clinics. Vol. I. Fifth Series. New York: J. B. Lippincott Company. 1895.

No comment is needed upon this work, as it has been before the profession long enough to have established itself fully. As usual the contributors to this volume are from widely distributed points, including lectures from the most prominent clinical teachers.

Maltine with Coca Wine.

This is the title of a pamphlet issued by the Maltine Manufacturing Company, in which is included thirty-seven articles clipped from the medical literature of the day by prominent men in the medical profession. They show the many indications for the products of this company, and the results of the treatment.

Transactions of the American Pediatric Society. Sixth Session, held at Washington, D. C., 1894. Vol. VI. Reprinted from the Archives of Pediatrics.

This volume contains the papers read before this association and the discussions upon them by the members, and includes papers from men who are prominent in this branch of medicine.

Hematherapy: Present Status and Technique of the New Treatment. By T. J. Biggs, M. D., New York City.

This is an interesting treatise containing besides the interesting paper by Dr. Biggs, several others which show the value of bovinine in therapeutics.

Books and Pamphlets Received.

Points about Trained Nurses.—No person has greater power for evil or for good than has the nurse in the sick-room. Her actual authority is second to that of the physician, but her opportunities for exercising it are almost unlimited. If a physician in a country town wishes to secure a trained nurse he should telegraph or write to the Nurses' Directory, to some hospital or physician whom he knows, in the nearest adjacent city, stating for what sort of a case he will require a nurse, what he will pay, and when he will require her. Such a message should secure for him almost immediately whatever service he requires. The traits of character which make the ideal nurse are patience, obedience, tact, and good sense and temper. The nurse's costume should consist of a cambric or seersucker gown, with white cap, cuffs, and apron. Woolen gowns should never be permitted in a sick-room. Her authority is absolute after the physician's. She must obey his instructions to the letter, even if they are against her judgment; she has no discretion in the matter. But the patient and the patient's family must obey her. She must never be allowed to disobey the physician's orders, and the first symptom of any such behavior should be reported immediately to the physician. All his instructions with reference to treatment, diet, and care should be followed faithfully. The fact that her patient is a man should make no difference in her behavior in the sick-room. He is a patient, not a man, and she a nurse, not a woman. Whenever a nurse disobeys a physician's orders, or behaves in any way which renders her dismissal advisable, the family or the patient should request the doctor to discharge her at once, and to supply her substitute. A word from him is sufficient to insure her departure.—*June Ladies' Home Journal.*

In the June number of the *North American Review* the Hon. Hilary A. Herbert, the Secretary of the Navy, who has been a close observer of the recent warfare between China and Japan, contributes an interesting article on the "Military Lessons of the China-Japanese War," and incidentally outlines the policy to be exercised by the United States toward the two Eastern nations.

Among the short articles published in the *North American Review* for June are, "The Modern Woman and Marriage," by Elizabeth Bisland; "Poor City Boys in the Country," by Alvan F. Sanborn; "Harnessing the Sun," by Prof. P. T. Austen, and "The Silver Question in Ancient Times," by Plain-Speaker.

Two Cases of Pseudo-Hypertrophic Paralysis in Brothers. Clinical Lecture Delivered at the Chicago Polyclinic by Archibald Church, M. D. Reprinted from the International Clinics.

Dislocation and Double Fracture of the Upper Third of the Humerus. By B. Merrill Ricketts, M. D., Cincinnati, O. Reprint from the Journal of the American Medical Association.

The Diagnosis of Pregnancy During the First Three Months. By Charles P. Noble, M. D., Philadelphia. Reprinted from the Transactions of the Philadelphia County Medical Society.

A New Method of Examination and Treatment of Diseases of the Rectum and Sigmoid Flexure. By Howard A. Kelly, M. D., Baltimore. Reprint from the Annals of Surgery.

Report of Seven Cases of Double Castration for the Relief of Enlarged Prostate Gland. By H. O. Walker, M. D., Detroit, Mich. Reprinted from the New York Medical Journal.

The Treatment of Fistula-in-ano by Lange's Method of Immediate Suture of the Tract. By Lewis H. Adler, jr., M. D., Philadelphia. Reprinted from the Medical News.

Relation Between Diseases of the Upper Air Passages and Diseases of the Eye. By J. G. Carpenter, M. D., Stanford, Ky. Reprint from the University Medical Magazine.

The Technique and Indications of Vagino-Fixation (Mackenrodt's Operation). By Hiram N. Vineberg, M. D., New York. Reprint from the New York Medical Journal.

The Therapeutical Application of Peroxide of Hydrogen (Medicinal), Glycozone, and Hydrozone. By Charles Marchand, Chemist, New York City. Ninth Edition.

Orchiectomy for Enlarged Prostate. Fragilitas Ossium. By Joseph R. Eastman, B. Sc., M. D., Indianapolis, Ind. Reprinted from the Indianapolis Medical Journal.

Locke's Materia Medica and Therapeutics, Edited with Pharmacological Additions. By Harvey W. Felter, M. D. Cincinnati: John M. Scudder's Sons. 1895.

Malposition of the Testicle; Phimosis; Acute Insanity; Operation; Cure. By Howard Crutcher, M. D., Chicago, Ill. Reprint from the Medical Record.

Celiotomy for Puerperal Septicemia and Peritonitis. By Charles P. Noble, M. D., Philadelphia. Reprinted from the American Gynecological Journal.

A New Operation for the Radical Cure of Hemorrhoids. By N. H. Henderson, Chicago. Reprint from the Journal of the American Medical Association.

Typhoid Ulcer; Perforation (?); Operation; Death. By B. Merrill Ricketts, Ph. B., M. D., Cincinnati, O. Reprint from the Cincinnati Lancet-Clinic.

The Operative Treatment of Varicocele. By A. B. Cooke, A. M., M. D., Bowling Green, Ky. Reprinted from the American Practitioner and News.

A New Method of Resuscitating the Still-Born. By A. B. Cooke, M. D. Bowling Green, Ky. Reprinted from the American Medico-Surgical Bulletin.

Cholecystostomy, with Report of Cases. By A. Morgan Cartledge, M. D., Louisville, Ky. Reprinted from the Louisville Medical Monthly.

Remarks upon the Treatment of Inevitable Abortion. By Charles P. Noble, M. D., Philadelphia. Reprinted from Codex Medicus Philadelphiæ.

Report of Additional Cases of Intracranial Neurectomy. By Louis McLane Tiffany, M. D., Baltimore, Md. Reprint from the Annals of Surgery.

The Relation of Static Disturbances of the Abdominal Viscera to Displacements of the Pelvic Organs. By J. H. Kellogg, M. D., Battle Creek, Mich.

Rational Therapeutics of Cholera Infantum. By Gustavus Blech, M. D., St. Louis, Mo. Reprinted from the New York Medical Journal.

Nervous Disease in Early Syphilis. By G. Frank Lydston, Chicago. Reprint from the Journal of the American Medical Association.

Squint, with Reference to its Surgery. By Charles H. Beard, M. D., Chicago. Reprint from the American Journal of Ophthalmology.

Notes on Three Interesting Cases. By Hiram N. Vineberg, M. D., New York. Reprinted from the American Journal of Obstetrics.

A Typical Case for Rapid Dilatation. By J. G. Carpenter, M. D., Stanford, Ky. Reprint from the Practitioner and News.

The Value of Gude's Pepto Mangan. By Hugo Summa, A. M., M. D. Reprint from the New York Medical Journal.

A Valuable Discovery, The Cure of Impotency. By Hugo Engel, A. M., M. D., Philadelphia. Reprinted from the Medical Summary.

Important Cases of Rectal Surgery. By J. G. Carpenter, M. D., Stanford, Ky. Reprint from the Cincinnati Lancet-Clinic.

Anti-tubercle Serum. By Paul Paquin, M. D., St. Louis. Reprint from the St. Louis Medical and Surgical Journal.

Specific Keratitis. By T. C. Evans, M. D., Louisville, Ky. Reprint from the American Medico-Surgical Bulletin.

Direct Fixation in Fractures. By B. Merrill Ricketts, M. D., Cincinnati, O. Reprint from the Times and Register.

Chloroform in Labor. By Edwin Ricketts, M. D., Cincinnati, O. Reprint from the Virginia Medical Monthly.

The Tubal Mole Pregnancy. By Hiram N. Vineberg, M. D. Reprinted from the New York Medical Journal.

Insomnia. By Curran Pope, M. D., Louisville, Ky. Reprint from the American Medico-Surgical Bulletin.

Sprains. By A. Ernest Gallant, M. D., New York City. Reprint from the Philadelphia Medical News.

Vaginal Celiotomy. By Hiram N. Vineberg, M. D., New York. Reprinted from the Medical Record.

Appendicitis. By John B. Murphy, A. M., M. D., Chicago. Reprint from the Medical News.

Aseptic Prophylaxis of Cholera; Arsenization. By Reginald B. Leach, M. D., Paris, Texas.

Catalogue of A. S. Aloe Co., St. Louis, Surgical Instruments and Supplies. Sixth edition.

Early Diagnosis of Cancer of the Uterus. By Edwin Ricketts, M. D., Cincinnati, O.

Sensible Temperatures. By Mark W. Harrington, Chief of the U. S. Weather Bureau.

Some Points on Stricture of the Rectum. By L. J. Krouse, M. D., Cincinnati, Ohio.

Surgical Clinic, illustrated. By Prof. Augustus C. Bernays, St. Louis.

New York Cancer Hospital, Tenth Annual Report, 1894.

Notes and Queries.

THE following is a list of instructions devised and used by Dr. A. Ernest Gallant, of New York, in his private work.

Unless one has a special nurse to care for all cases in his practice, the same routine must be gone through with in instructing her how each case is to be cared for. It is true that every nurse who is properly trained should not need these extra instructions oftentimes, but nurses are glad of the opportunity not to have to be burdened with all of the responsibility, especially in the case of emergencies, and we think this blank will prove of benefit to every surgeon doing any operative work, especially if abdominal, as well as to the nurse in charge of his case.

It is printed upon paper of convenient size. On the first page is the following: Preparation for Operation and After-care. Below this is the name and address of the surgeon. Inside are the directions before operation on the one side and directions for the after-care on the other.

For M.....

*Date.....A.P.M.....day.....*189

BEFORE OPERATION.

1. URINE—Urine to be sent to my office for examination once, preferably twice, several days before operation.
2. BOWELS—Move the bowels with castor oil or Epsom salts the second night before operation.
3. BATH—Take a warm bath and douche night or morning before operation.
4. DOUCHE—Douche with two quarts hot water one hour before operation.
5. EATING—Eat easily digested food day before operation, but nothing whatever on that day except by special direction.
6. ROOM—Place in room in which operation is to be performed any table, three and a half feet long or longer, covered with two sheets, doubled.
7. SUPPLIES—Two hot bottles.
   Six to twelve towels.
   Two pitchers and basins.
   One fountain syringe.
   One douche pan.
   One wash boiler of boiling water.
   Little whisky or brandy.
   Half pint ether.
8. The room in which operation is to be done should be comfortably warm (70° to 75° F.). All surplus furniture should be removed.
9. Patient should be ready for operation at time stated, dressed in undervest, night-dress, and stockings, ready to be put in bed.

AFTER OPERATION.

1. POSITION—The patient is to lie in bed as quietly as possible, on the back, unless some other position is directed, and no pillow is to be used without permission.

2. Vomiting—Be sure and have a small basin at hand in case of vomiting, when the head must be turned well to one side and the mouth wiped free from vomited material.

3. Persistent Vomiting—In case of vomiting or persistent nausea any time within twelve hours after operation, a mustard plaster may be applied over the stomach until the skin is thoroughly reddened. If, at a later stage, nausea, vomiting or hiccough appear, notify the medical attendant at once, and discontinue every thing by the mouth until the trouble is relieved.

4. Urine—The urine is to be passed voluntarily, even if it is necessary to sit up to accomplish it, except by special direction or in case of abdominal section, when, if patient can not pass it in the horizontal position, a catheter is to be used every six or eight hours. The urine to be measured and sent to me for examination daily.

5. Bowels—The bowels are to be moved on the second or third night after operation by castor oil or salts, unless otherwise directed.

6. Enemata—An enema may be given six to eight hours after taking the laxative, but it is better to have special advice about this.

7. Hemorrhage—In case of suspected hemorrhage, high temperature (over 100°), increased rapidity or change in pulse, notify medical attendant at once.

8. Bedside Notes—If nurse is present, the temperature, pulse, and respiration are to be taken every four hours. The quantity of urine, passage of gas, movement of the bowels, quantity, color, and consistency; giving of fluids and other foods, time, quantity, and character; all to be noted on charts or book provided, also time and character of sleep to be recorded.

9. Drinks and Food—None to be given for twelve hours after operation, only by special direction. Equal parts of milk and Vichy, twelve hours after operation, in quanities desired. Unless directed to the contrary, this diet to be continued for one week.

10. Douches are to be given in all vaginal cases on the third day after operation unless directed to the contrary.

11. Daily Reports to medical attendant should be sent during the first week.

12. Advice regarding any point in doubt, ask attending surgeon.

13. Enemata of hot water may be given for stimulation and thirst by special order only.

14. Special Directions as to drinks, food, stimulants, drugs, baths, sleeplessness, nutrient or stimulating enemata, etc. (See Bedside Notes.)

Dr. Ervin A. Tucker, who for the past five years has been Resident Physician at Sloane Maternity Hospital, New York City, will on July 1st leave the hospital to begin private practice. He will continue to have an active interest in the hospital, however, having been appointed Assistant Visiting Physician. He will devote his attention to obstetrics as a specialty, his address being 62 West Forty-eighth Street, New York City.

At the golden jubilee of the University of Notre Dame it was publicly announced before the assembled distinguished guests, that the University had conferred the degree of LL. D. upon Dr. William H. Wathen, A. M., M. D., of this city. It gives us pleasure to announce that Dr. Wathen has received this well deserved honor in recognition of his attainments as a doctor, a scholar, and a teacher.

THE FOLLOWING SPECIAL ARRANGEMENTS HAVE BEEN MADE.

MATHEWS' MEDICAL QUARTERLY and the American Practitioner and News, to one address, for one year to new subscribers, $4.00.

MATHEWS' MEDICAL QUARTERLY and The Medical Fortnightly, St. Louis, both one year, including a copy of "Funnybone," $3.00.

MATHEWS' MEDICAL QUARTERLY and the Mid-Continent Magazine, to one address, new subscribers, for one year, $2.75. Send orders to

HENRY E. TULEY, M.D., Box 434, Louisville, Ky.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to EDITORS OF MATHEWS' MEDICAL QUARTERLY, Box 434, LOUISVILLE, KY.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the QUARTERLY will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The editors are not responsible for the views of contributors.

Special Notices.

PULMONARY TROUBLES.—After a practice of nearly thirty years and quite an extensive one in regard to pulmonary troubles, having used all of the emulsions, maltines, and different preparations that are recommended for said troubles, I find Terraline one of the most efficient and pleasant preparations that I have ever prescribed.

CLAY, KY., February 8, 1895. W. I. MOORE, M. D.

MALARIAL CONDITIONS.—For all malarial conditions quinine is the best remedy we have. But associated with this condition there is always more or less pain, which often renders the life of the individual uncomfortable, if not positively miserable. Antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of the malarial poison. All such conditions are greatly benefited by the use of antikamnia and quinine. In headache (hemicrania), in the neuralgias occurring in anemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of this combination will produce the most happy results. In cases of malarial fever it should be given as a prophylactic and cure.

"Antikamnia and Quinine" are put up in tablet form, each tablet containing two and one half grains of antikamnia and two and one half grains of quinine, and is the most satisfactory mode of exhibition.

THE CALIFORNIA FIG SYRUP DECISION.—The recent decision of Judge Swan, of the United States District Court for the Eastern District of Michigan, against the California Fig Syrup Co., is an unfortunate one for public morals and property rights, and is so much at variance with justice and common sense that it must surely be reversed when a clearer-headed judge in a higher court reviews the decision.

The suit in question was to restrain a certain manufacturer from the use of the words "Syrup of Figs," or "Fig Syrup," as applied to a liquid laxative of his manufacture. The judge denied the prayer of the California Fig Syrup Co. on the ground that the name "Syrup of Figs" was both descriptive and deceptive. This seems to us a paradox, and the judge, when he made this decision, must have been wool-gathering. We do not understand how the name can be descriptive and deceptive at the same time.

The truth of the whole matter is that the name "Syrup of Figs" was a new collocation of words first applied by the California Fig Syrup Co. to a liquid laxative preparation, and the title is as truly fanciful (since it is NOT a syrup made of figs) as if they had coined some jaw-breaking word to designate it. They have, therefore, a proprietorship therein, and no man has a moral or legal right to use these words to describe a laxative preparation of his own manufacture.—*National Druggist*, May, 1895.

EDWARD RUSH PALMER, M. D.

MATHEWS'
MEDICAL QUARTERLY.
"ALIS VOLAT PROPRIIS."
Vol. II. OCTOBER, 1895. No. 4.

Original Contributions.

DISASTROUS RESULTS FOLLOWING WHITEHEAD'S OPERATION FOR PILES AND THE SO-CALLED "AMERICAN OPERATION."*

BY EDMUND ANDREWS, A. M., M. D., LL. D.,
Professor of Clinical Surgery.
CHICAGO, ILL.

Ten years ago Mr. Whitehead, a surgeon of Manchester, England, conceived the idea of treating hemorrhoids by a new method. He simply dissected out and cut off the whole lower inch of the mucous membrane of the rectum with all the piles and hemorrhoidal veins, arteries, nerves, and connective tissue attached to them. Figure 1 will explain the plan:

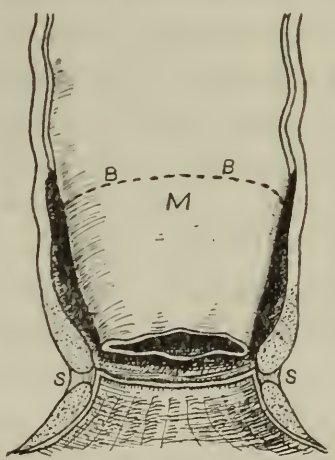


FIG. 1.

FIG. 1.—*SS.* The lower circular incision along Hilton's white line; *M.* Tube of mucous membrane dissected loose from the sphincter; *BB.* Dotted line showing the place for the upper circular incision.

*Read at the Mitchell District Medical Society.

Mr. Whitehead, after clearing out and trying to disinfect the rectum, commences by a circular incision, following "Hilton's white line," that is to say, the junction of the skin and mucous membrane along the verge of the anus. Then he dissects up the mucous membrane with the attached piles, hemorrhoidal veins, arteries, nerves, and connective tissue, thus stripping bare the tube of the internal sphincter as high as the piles extend, generally about an inch, so that the dissected part hangs loose in the anus like a cuff of bloody tissue.

The cuff is then cut off above the level of the piles and taken away, and the arteries ligated as fast as divided. The mucous membrane remaining above is then drawn down and stitched to the cut end of the skin, hoping for a union by first intention. This hope, however, frequently fails, in which case the stitches give way, the membrane draws up into the rectum, and a tubular or annular ulcer results, which contracts in healing and causes stricture.

Certain persons, calling themselves "Orificial Surgeons," have slightly changed the order of procedure by pulling down the mucous membrane and making the upper incision first, and the lower one last. For this slight variation they have invented the pompous title of the "American Operation." The final effect is the same in both. As the hemorrhoidal vessels are all gone, the patient is permanently cured, since there is nothing left of which piles can be made in the future, just as a patient who has had both his jaws excised will never have any more trouble with his teeth, or if his foot is amputated he will never have any more corns on his toes. A description of the peculiar mechanism and important functions of the mucous membrane and submucous tissues of the rectum will show that we are not dealing with a simple, smooth mechanical tube, but a highly specialized organ, which can not be dissected out and destroyed, as is done in a thorough Whitehead's operation, without doing great and irreparable mischief to the patient.

As above stated, the mucous membrane of the lower inch of the rectum has a peculiar mechanism, constituting it a tactile organ, which is the seat of a very acute special sense by which a healthy person is warned of the presence and downward progress of the fecal mass. Its nerves also possess remarkable reflex powers

over the sphincter muscles, so that they resist the sudden and unexpected escape of feces and flatus without the necessity of a constant mental attention and exertion of the will.

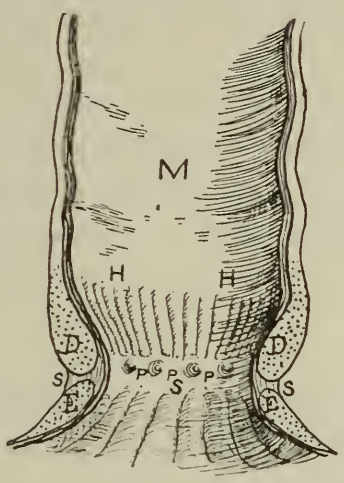


FIG. 2

FIG. 2.—*M.* Mucous membrane above the sphincters; *HH.* Columns of Morgagni; *DD.* Internal sphincter; *EE.* External sphincter; *SSS.* Line of junction of the internal and external sphincters, also called Hilton's white line, or the junction between the skin and mucous membrane.

Figure 2 is a longitudinal section of the rectum. *DD* is the internal sphincter. *EE* is the external sphincter. *HH* is a band or series of little perpendicular projections each about a centimeter long. They are called the columns of Morgagni, and they are the seat of part of the special tactile sense of the rectum. The grooves between the columns terminate below in little pouches called sacculi Horneri, from the old anatomist Horner who first described them. The grooves and pouches contain a reserve of tenacious mucus intended to lubricate the descending mass of feces. The "orificial surgeons" have claimed these natural pouches as a new discovery, and call them "lesions," which possess a horrible reflex power, causing almost all the diseases of the body, "from the brain to the muscles." They cure them by the "American operation," or sometimes by merely splitting them down on a blunt hook.

Just below the columns of Morgagni are about eight small papillæ, *PPP*, surrounding the rectum just above the verge of the anus. Each one has an artery and a nerve, and under its base is a little ganglionic enlargement of the nerve. They are important tactile organs connected with the special rectal sense.

The junction of the mucous membrane, *S S S*, is called Hilton's white line, though it is not often distinctly white. It marks the lower line of incision in Whitehead's operation, and is the line or ring of connective tissue separating the external from the internal sphincter.

I have entered into a very extensive correspondence with eminent men both in Europe and America to gather facts as to the results of Whitehead's operation and of the "American operation," which, as before stated, is essentially the same thing. The following table gives a summary of the disasters reported to me:

TABLE.

Loss of the special sense by which the patient should be warned of a coming evacuation and enabled to prepare for it	8 cases
Incontinence of flatus and feces	23 "
Paralysis of the sphincter	4 "
Chronic inflammation of the rectum	1 "
Failure of union of the wound by first intention, with retraction of the edges of the wound, forming a contracting tubular ulcer with stricture	9 "
Other ulcers	2 "
Irritable and painful anus	12 "
Eversion of the mucous membrane	4 "
Neuralgia of the pelvis and inferior extremities	2 "
General neurasthenia	1 "
Fatal peritonitis	1 "
Fatal septic complications	1 "
Non-fatal septic results	5 "
Fistula in ano	1 "
Cases reported as having bad results without accurate description	127 "
Total	201 cases.

The first item in this table is the loss of the special sense warning the patient of a descent of feces and an approaching evacuation. This is a remarkable condition not described by any author. The reason of the disaster is this: Whitehead's operation, if thoroughly performed, has swept away the whole tactile mechanism of the rectum, and has brought down from above a covering of mucous membrane naturally almost devoid of nerves of sensation, and therefore of nearly all tactile special sense. Hence the patient in many cases gets no warning of a coming evacuation of the bowels until he feels it in his clothing. However, this membrane, like the peritoneum and the small intestines, may acquire a very painful sensibility if it becomes

inflamed. Now the patient gets a sort of painful warning enabling him to rush to the closet in time to save his clothing. If the upper incision is made pretty low down, preserving some tactile membrane, the mischief is much less.

Another evil of destroying the tactile and reflex mechanism is that the involuntary reflex action of the sphincters is ruined, and when feces are found descending the patient can only retain them by a constant effort of attention and of will power, which is very annoying and can not be kept up for a great length of time.

One common accident is the failure of the effort at union by first intention. In this case the stitches give way, the mucous membrane which had been pulled down by force draws up again and leaves the anus and lower rectum occupied by a tubular granular ulcer around the whole circumference. This contracts in healing and produces stricture, which has resulted in numerous instances.

Another class of accidents, very common, consists of those which are included under the general name of septicism. Operations which by ligature or by actual or potential cautery close or sear the wounded parts are measurably free from this risk, but those which make extensive incisions have no such safety. The risk from this source in Whitehead's method is not very great, but it is something.

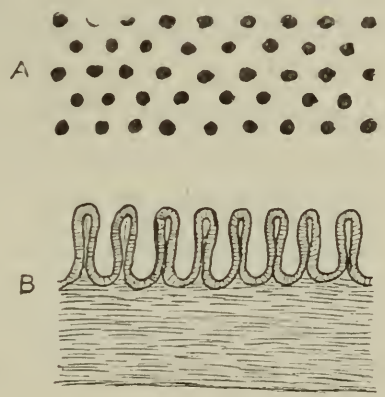


FIG. 3.

FIG. 3.—Diagram of the rectal mucous glands. *A*. The surface of the mucous membrane showing the position of the orifices of the glands; *B*. Section of the membrane showing the follicles cut through lengthwise.

There are a number of thoughtless though reputable authors who talk in a glib way of rendering the rectum perfectly aseptic

during an operation by tamponning its upper portion and scrubbing and disinfecting the surface of the mucous membrane below the plug. Something can be done in this way, but only imperfectly. The rectal mucous membrane is not like a surface of polished glass which can be perfectly cleansed by mechanical and chemical appliances; on the contrary, it is a spongy, honey-combed structure containing several millions of glandular cavities, all opening into the septic channel of the organ and accessible to all sorts of germs. A thousand years of douching and scrubbing would scarcely accomplish complete disinfection of the cells, hence all incisions in it are made through infected territory.

The impossibility of any such complete disinfection of the tissues as certain careless writers allege is obvious. Still partial purification can be accomplished by much diligence, and efforts for it should be thoroughly made, but let no man deceive himself by trusting to it as perfect and complete. Hence those operations which close up the wounds in the loose submucous connective tissue by ligature, by clamp and cautery, or by searing the wounds immediately with chromic acid or other caustics, are safer than the great wound of Whitehead's operation, which is slowly made, slowly closed by sutures, and can not be cauterized.

Twenty-three cases in the table had incontinence of flatus, mucus or feces. Many of these are due to paralysis of the sphincter from destruction of the nerve supply.

There is reason to think that some operators have got confused by the flow of blood and have taken out the internal sphincter with the mucous membrane. This gross error can of course be avoided by an educated man, but the most of the disasters reported to me might happen to any one. I do not agree with those few distinguished gentlemen who have boldly asserted that all the evil results are due to bad operating.

I have corresponded with a large number of eminent surgeons both in Europe and in this country to ascertain the general opinion as to this operation.

Prof. Mansell Moullin, of London, the author of Moullin's Surgery, writes me that Whitehead's operation is not often performed in London, and that there is a prevalent opinion that stricture is liable to follow it. He thinks its usefulness is restricted to a few selected cases.

Mr. Allingham, of London, thinks the Whitehead only adapted to a few cases with varices all around the rectum. For the great majority of patients he thinks ligature is the best of all operations. Smith, of London, always preferred the clamp and cautery to any other plan.

Mr. Reginald Harrison, a well-known surgeon in London, dislikes the operation. He prefers the clamp and cautery.

The surgeons in Berlin rarely perform it, generally preferring the clamp and cautery.

Prof. Esmarch, of Kiel, the inventor of Esmarch's bandage, never uses the Whitehead method. He seizes the pile with forceps, cuts it off, ligates any spurting vessels, and closes the wound with catgut.

Prof. Koenig, of Göttingen, never performs it. He writes me that he always applies the thermo-cautery, and gets his patients back to business in eight or ten days.

The surgeons in Vienna prefer the clamp and cautery in most cases.

I am unable to learn of any surgeon in France preferring the Whitehead. Verneuil and Fontau are much in favor of treating piles by dilatation alone, without any incision, ligature, or cautery, and many other French surgeons follow their example.

Prof. Marcy, of Boston, favors the operation, and has devised improvements on it.

Prof. W. J. Otis, of Boston, opposes it, and has seen bad results from it.

Prof. Wyeth, of New York, thinks the operation a good one if properly performed in selected cases. He has seen three bad cases after the "American operation" done by an "orificial surgeon" in Chicago.

Prof. McBurney, of New York, likes the Whitehead in cases where the varices occupy the whole circumference of the gut, but in most instances he prefers ligature done after Allingham's method.

Prof. Kelsey, of New York, a standard author on the rectum, says the "misfits" caused by the "American operation" are a constant source of income to him; that the "American" and the Whitehead are alike, and neither of them has any excuse for existence. He thinks "ten per cent. of the patients need a

second operation to cure them, not of the piles, but of the operation for piles."

Prof. William White, of Philadelphia, says he has given the operation a fair trial, and now rarely performs it.

Prof. Hunter McGuire, of Richmond, thinks the operation unnecessarily severe, and that all the cases are better cured by the ligature or thermo-cautery.

Prof. Merrill Ricketts, of Cincinnati, earnestly condemns both the Whitehead and the "American." He has devised a new operation by submucous ligature after the plan here shown:

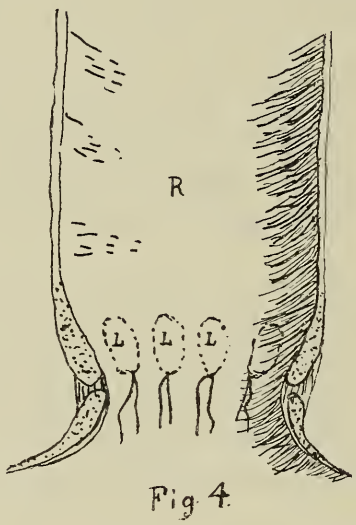


FIG. 4.—Ligation by Prof. Rickett's plan. *R.* Interior of the rectum; *L L L L.* The dotted circles represent the course of the ligatures beneath the mucous membrane enclosing circles of varicose tissue. The ends are left hanging out.

Instead of sacrificing the entire mucous membrane he saves the whole of it. With a semicircular needle he inserts a series of silk ligatures through the lower part of the membrane and surrounds and ties up the venous plexus in a series of loops, leaving the ends of the ligatures hanging out. It is not necessary to strictly tie all the varices. The parts between the ligatures become obliterated with great certainty. This will probably be found a valuable operation.

Prof. Roswell Park, of Buffalo, favors Whitehead.

Prof. Nancrede, of the University of Michigan, opposes the operation. The results he has seen are very bad.

Prof. Mathews, of Louisville, opposes the operation strenuously. He says the idea that it is at all necessary to dissect out all the varicose veins is chimerical, and much injury is often done to the sphincter muscle, and that the ligature will cure all these cases much more safely. He adds, "In regard to the so-called American operation it is merely a modification of Whitehead's. The necessity for performing it never exists, except in a homeopathic brain. I have seen a great number of wrecks from this uncalled for surgical procedure."

Many other surgeons have given me similar opinions. About four fifths of them oppose the operation.

The peculiar cases supposed to demand Whitehead's operation are those where the whole circumference of the rectum and anus is covered with piles and varicose veins. Some authors seem to know of no way to get rid of them except to dissect out or destroy the whole plexus. This is a melancholy blunder. It is of the utmost importance to know that if you destroy by ligature or cautery about one half the height of the main pile tumors, or one third the area of any broad, flat varicose tracts, the remainder of the tumors or other varices always atrophy and disappear. The destruction of the whole tactile mechanism of the organ is absolutely unnecessary.

Prof. E. C. Dudley, of Chicago, treats broad varicose tracts as follows:

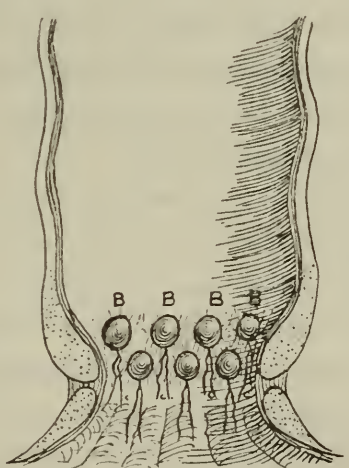


FIG. 5.

FIG. 5.—Dudley's method of ligation of flat varicose areas. *B B B.* Buttons or knobs of varicose tissue picked up and tied.

He picks up the mucous membrane and subjacent veins with a tenaculum or with toothed forceps at a number of different points

and ties each bunch as he raises it. The spots tied are arranged in rows, as shown in the figure. The tied bunches slough off, and the enlarged veins in the areas between them become atrophied and disappear.

On the whole the ligature and the clamp and cautery are the main reliance of most surgeons. It is possible that the submucous ligature of Ricketts, the new plan of Dudley, and the simple forced dilatation of Verneuil may become favorite methods in the future, but Whitehead's operation and its offspring, the "American operation" of the "orificial" quacks, have proved far too disastrous to be worthy of the confidence of surgeons.

2520 Prairie Avenue.

DISEASE OF THE SIGMOID FLEXURE.*

BY J. N. BAUGHMAN, M. D.,
FLAT LICK, KY.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

The large intestine is about five feet in length and begins with the cecum in the right iliac space, then the colon runs upward to the under border of the liver where it makes a sharp curvature going transversely across the upper border of the abdomen to the left hypochondriac space, then another sharp curve downward to the left iliac space where we have a sharp deflection, the sigmoid flexure, then the large, pouch-like portion called the rectum, which terminates at the anus.

The first portion of the large intestine, or cecum, is the largest, and the colon gradually decreases in size until it reaches the rectum, the sigmoid flexure being the smallest portion.

The structure of the large intestine, and especially the mucous membrane, is very much like the stomach. The peristaltic action is a great deal more sluggish than in the small intestine, which causes the contents of the alimentary canal to pass through the entire small intestine in from one twentieth to one fifteenth the time that is required for its sojourn from the cecum to the anus.

* Read before the Southeastern Kentucky Medical Society, Richmond, Ky., July, 1895.

The colon, where it leaves the cecum, is smaller than the cecum, and this fact would naturually cause a sluggish movement of the alimentary mass at this point, and we would find this same impediment to the intestinal contents at the hepatic and splenic curvatures of the colon and also in the sigmoid flexure. From this very reason we would be more likely to find the colon in a diseased condition at those points than at any others, for the long contact of the mucous membrane with the alimentary mass at these points would set up a state of congestion that other parts would not be subjected to, and it is at these points where we are to expect an obstruction in the bowel, especially an impaction. These disorders are most generally constipation, diarrhea, and dysentery.

The sigmoid flexure is more liable to a different train of disturbances than any other portion of the colon from the fact that it is the storehouse or receptacle where the feces are retained until their expulsion in the act of defecation. O'Bierne taught long ago, and it has since been conclusively proven, that the rectum is almost devoid of feces except just before and at the time of defecation. That the fecal mass is retained in the sigmoid flexure until certain periods when it descends into the rectum when there is a desire to go to stool, and if this desire is not gratified the mass of feces is lifted back into the sigmoid where it remains until another desire for defecation, and even if the desire of evacuating the bowel is gratified and not all of the fecal mass expelled from the rectum the remaining portion is lifted back into the sigmoid where it remains.

The powers of the colon for absorption are very great and all of the watery portions of this retained fecal mass is soon absorbed into the system and leaves a dry, hard mass of foreign matter in contact with the tender mucous membrane which may and often does bring on a train of diseases of this part of our anatomy that unless relieved by appropriate treatment results in confirmed invalidism.

It seems that in nearly all the works written upon the practice of medicine and surgery none of them have given much attention to the sigmoid flexure, but have placed the various troubles of the colon and sigmoid as being of the same nature and giving the symptoms, morbid anatomy, prognosis and treatment as the

same. From the description and general physiological action heretofore given in this paper, it is very clear that while part of the functions and diseased conditions of the entire large intestine are similar, the sigmoid has various functions to perform and is the prey of various diseases that we seldom or never have higher up in the gut, but at the same time it is almost impossible to clearly separate them in diagnosis and treatment. I am convinced that the sigmoid flexure is more often the seat of obscure abdominal disease than has generally been suspected, and if we would pay more attention to the treatment of the sigmoid upon a rational and common-sense therapeutics, we would get more cures and clear up many of these troubles. There are a great many cases of chronic diarrhea and chronic dysentery that go uncured for years and cause the patient untold suffering, and finally results in death, which, if located in the sigmoid flexure, and appropriate local treatment given, would be cured. This is true to a great extent with the entire colon, for I do not want to be understood as advocating the fact that all these troubles are situated in the sigmoid, for the rectum and colon always come in for their share of these troubles, but I assert that from the physiological action of the sigmoid flexure it is more reasonable to expect to find the seat of trouble in this portion of the gut.

The various troubles found in the sigmoid are inflammation and all its attendant evils, beginning with congestion, and too often terminating in ulceration, stricture and cancer, and it is very often impossible to diagnose just what the trouble is. The symptoms are often vague and misleading, and only by the most painstaking examinations are we led to the truth. We most frequently have diarrhea, but on the other hand we frequently have constipation. Deep pressure over the left iliac region will generally elicit some pain if there is any serious disease in the sigmoid, but it is very difficult to arrive at any positive conclusion as to tumors in this region unless it is a very lean patient. We generally have vague pains through the abdomen and thighs, also in the bladder, uterus, and prostate, with disordered action in these parts. The most positive conclusions are obtained from the fecal evacuations. I say fecal, but it is sometimes very little feces we find. The patient generally complains of passing a great deal of matter at each evacuation, and often suffers a good deal of pain

in the lower part of the abdomen just before an evacuation of the bowels, and this pain is worse in the left iliac region. The physician should invariably see the evacuation, for the statement of the patient is often misleading, and it is from the nature of the evacuations that we are to learn most in our diagnosis. If we find the discharges contain a great deal of mucus and no pus we are pretty sure we do not have any ulceration but only a congested state of the mucous membrane with, perhaps, a beginning inflammation. To say just where congestion ends and inflammation begins is a very nice point in diagnosis, and one that is not often obtained. If we have a great deal of pus in the discharges we know we have to deal with a severe form of inflammation, and most likely ulceration. If we have blood and pus in the evacuations we may feel very certain that there is ulceration in some portion of the large intestine, and the chances are that if an ocular and digital examination have shown the rectum to be healthy, this trouble is located in the sigmoid. If there is no specific trouble and nothing to indicate malignancy, these various divisions of congestion, inflammation, and ulceration will be of great service to us in our prognosis. A simple congestion should as a rule yield to appropriate treatment, and I feel assured that in inflammation of the mucous membrane of the sigmoid we should generally cure it unless it is in the severer forms of inflammation. Dr. Mathews says, in his book on Diseases of the Rectum, that these inflammations are very hard to cure and resist treatment for a long time. I can not see why, with our advanced modes of treating inflammation by antisepsis, we should find the state of the sigmoid so rebellious to our therapeutics as Dr. Mathews would suggest, though I am aware of the fact that a severe inflammation is very hard to manage.

If the disease has existed for some time we generally have quite an amount of emaciation, and if there is much ulceration the sufferer is completely exhausted after each evacuation. We often have eight to ten evacuations in the twenty-four hours, and the principal portion of them will be mucus and pus. There is often an accumulation of feces in the sigmoid that is causing the inflamed and ulcerated mucous membrane, and thus producing a great deal of mucus and pus that requires many evacuations that is believed to be a diarrhea, when in fact it is a constipation or

accumulation of feces that is causing the trouble. In these cases we are liable to give an aperient to wash out the bowel, which is just what should be done, but after this we often give an opiate, and by so doing we only add fuel to the fire we are trying to destroy. In these cases, after the aperient is administered, it is local treatment, rest, and dieting that will give us the best results. I contend that the entire colon can be rendered aseptic, and, surgically speaking, be kept clean. With Wales rectal bougie and a Davidson syringe we can reach the colon with ease, and by using an injection of hot water impregnated with boric acid we thoroughly clean out the colon and leave it in a surgically aseptic state. About the best treatment for a simple congestion or inflammation of the sigmoid flexure is to begin with an aperient of some kind, preferably sulphate of magnesia, and after the bowels have been thoroughly evacuated to introduce a Wales rectal bougie, No. 5, until it passes into the flexure, and then with a household or Davidson syringe, with the nozzle tightly fitted into the cavity of the bougie to inject about one half gallon of hot water impregnated with one half to one ounce of boric acid into the colon. This should be retained some five or ten minutes, if it can be retained so long, but the first time it is used it is apt to be evacuated almost immediately. This injection I repeat once in every twenty-four hours. I also request my patient to take but a moderate degree of exercise. A soft diet should be enjoined, oysters, milk, coffee, mush, soft-cooked eggs, with a very small amount of bread, and but very little if any meats to enter into the diet. Salol, listerine, and pasturine are good internal antiseptics, but if there is any tendency toward diarrhea I give about one dram of sub. nit. bismuth often enough to keep the bowels from acting more than once in the twenty-four hours, and I suggest to the patient to go to stool just after the morning meal. If one will go to the closet at a certain hour each day he can soon become accustomed to it until the desire to go will come on at about that hour each day. After two or three days the bismuth will only have to be taken once a day, and then once in two days. It is claimed that the bismuth reaches the colon unabsorbed and acts as an antiseptic, and its healing qualities are well known by all the profession.

The injections of hot water and boric acid should be kept up

for five or six days when the mucous membrane of the intestine will be in such an aseptic condition as to receive a healing application. By the same process as the hot water and boric acid injections we are enabled to apply other remedies direct to the mucous membrane of the sigmoid and also to the entire colon. One of the best applications is fluid hydrastis, and this should never be substituted by the fluid extract of hydrastis, for the alcohol in the fluid extract would be very irritating to the inflamed mucous membrane. One to two drams of the fluid hydrastis should be diluted in two ounces of warm water, and having the patient upon the left side, rather in the Sims position, the rectal bougie is introduced into the sigmoid, which is usually easily done, and the two or three-ounce mixture is injected into bowel and the instrument is withdrawn. The patient should remain very quiet for from one half to one hour, for by this precaution the medicament will remain for an indefinite time. The best time for this is at night, for then the patient will likely go to sleep and remain quiet until the medicine is all absorbed. Once in twenty-four hours is often enough for this application. After a few days it is well to use an injection of almond oil, iodoform and sub. nit. bismuth instead of the hydrastis, one ounce of the oil with, say eight grains of iodoform and one dram of bismuth is about the proportion to use for a single injection, and this may be kept up daily for some time, and occasionally the use of the hydrastis for one or two applications may be again used (Mathews). It is a good idea to occasionally wash out the bowel with the hot water and boric acid to keep it clean and aseptic. I wish to impress the fact that the cure of this class of troubles is best obtained by strict asepsis and the use of antiseptic and healing applications. I feel convinced that most all cases of a simple inflammatory character in the sigmoid may be cleared up by this treatment, and many cases of chronic diarrhea, dysentery, and constipation of years standing may be cured, provided the inflammatory process has not produced organic changes in the parts that are beyond relief.

Syphilis, which to-day is one of the scourges of mankind all over the world, has not neglected to pay its respects to the rectum and sigmoid flexure. In cases of specific ulceration of the sigmoid we would follow the same local treatment as in the

simple ulceration, but we would place our patient upon a general specific treatment, just as we should in any case where there is syphilis. I will not go into any of the treatment for syphilis, but refer to works upon this disease. Syphilis of the sigmoid should always be suspected, and if there is the least trace of constitutional disease we should at once begin a general crusade against the specific disease, for as long as it is in the system we may not expect to relieve the local trouble, and one of the most intractable troubles of the sigmoid is stricture, which nine times out of ten cases is caused by either syphilis or cancer. Stricture from either of these diseases is a most deplorable disease and one that nothing short of surgical interference can remedy, and even this is only a dernier resort. Stricture is generally caused by deposits of some organized growths in the parts, and when we have this state of affairs we can only expect its relief by removal, and as the sigmoid is so high up from the anus we could scarcely hope to reach it for its removal, but we might by division of the strictured part relieve it. We could hardly expect to do much by the use of bougies, for as soon as they are removed the parts are as tight as ever, and, besides, there is danger in their use, for in trying to pass them into the strictured part we may push through the gut and find our bougie had entered the peritoneal cavity. Especially is this so in cancerous stricture. I think if we have a non-malignant stricture that has produced an obstruction that puts the life of the patient in the scales, we should do an operation for artificial anus. By this means we may save life, and the patient lives for years and even the stricture may be relieved, but it is hardly to be hoped to prolong the life of a patient suffering from malignant stricture in the sigmoid, and I doubt if we would be justified in doing so grave an operation as colotomy upon one who is in the physical condition we would find them in this stage of the disease. Still we have a few cases that have been relieved, but is the game worth the ammunition and the risk? In a case where there is no malignancy we may do the operation with every hope of a successful termination, but for relief from the strictured condition caused by cancer we have everything against us in our operation.

In some rare cases we may have an impaction of fecal matter in the sigmoid which may be relieved by copious injections, or if

this fail, by the aid of a Sims speculum introduced into the anus we may be able to remove the foreign mass with the aid of a scoop. If both should fail to remove the mass we would be justified in doing a laparotomy as in other diseases of the intestines requiring surgical aid.

HEMORRHOIDS; PROLAPSED RECTUM; NEW OPERATION.

BY MERRILL RICKETTS, M. D.,
CINCINNATI, OHIO.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The object of this paper is to present means more simple than have heretofore been offered for the radical cure of a prolapsed rectum and the obliteration of hemorrhoids.

It is first necessary to understand the anatomy of the pelvis, and especially the rectum and its immediate environments and the causes of these two conditions.

It being taken for granted that the practitioner possesses this knowledge, a brief explanation is all that is necessary to understand how to proceed: first,

Hemorrhoids. After widely dilating the sphincter with the fingers, under surgical anesthesia, a large semicircular needle is passed subcutaneously from the muco-cutaneous line to the upper border of the pile-bearing area and then returned to make its exit at the point of entrance; the needle is then removed, and the silk ligature made taut about the venous plexus, and the ends left hanging out. These ligatures may be from one half to an inch apart, as the case may require. It is not necessary to tie all the varices in this way, as the atrophic changes will necessarily obliterate the remaining ones. No tissue is sacrificed; the mucous membrane remains intact; there is no hemorrhage, no infection, no pain of consequence, and the loss of time is practically nil.

While the operation is absolutely radical and without any serious consequences, the sutures are allowed to come away of their own accord.

The operations made in this way for this condition have resulted in an absolute cure, and the patients have experienced but little pain during the life of the ligature.

Prolapsed rectum is treated in the same manner, except a greater number of ligatures are required. If they are properly and evenly adjusted the atrophy of the tissues is symmetrical and the pathological condition is relieved without stenosis.

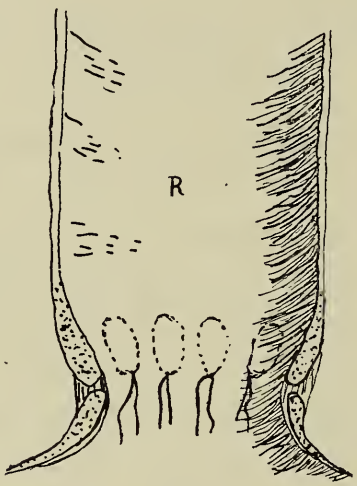


FIG. 1.—Ligation by Prof. Rickett's plan. *R.* Interior of the rectum. The dotted lines represent the course of the ligatures beneath the mucous membrane inclosing circles of varicose tissue. The ends are left hanging out.

It is of course necessary to pass the needle somewhat deeper in cases of prolapsus than it is in hemorrhoids pure and simple.

The time required, however, for prolapsus is greater than that for hemorrhoids, it sometimes being necessary for a second sitting at an interval of from four to eight weeks to correct the deformity.

It may be that kangaroo tendons, chromatized catgut, silkworm gut, or silver will answer the purpose better than silk.

Nothing but experience, however, will settle this question.

Two operations for congenital prolapsus of the rectum to an exaggerated degree have resulted most satisfactorily.

It is to be hoped that this or some other procedure will supplant the operation of Whitehead or the so-called infamous American operation. The sooner these two operations are relegated to oblivion the better it will be for the laity, and the subsequent operations will be fewer to remunerate the rectal surgeon.

THE TRINIDAD, 415 Broadway.

Gastro-Intestinal Disease.

"INTESTINAL INDIGESTION."

BY A. P. BUCHMAN, A. M., M. D.,
Professor of Diseases of the Digestive Organs, Fort Wayne College of Medicine.
FORT WAYNE, IND.

[Written for MATHEWS' MEDICAL QUARTERLY.]

If one remembers and takes into consideration the similarity of structure of the entire digestive tube, it will be readily comprehended that what is said of diseases of the stomach may, without great change, be applied to the diseases of the intestine, beginning with the stomach and ending with the ileo-colic valve.

The pathologic characteristics of a catarrh of the stomach, as well as of the canal farther on, are of so much importance in formulating a clear comprehension of the further effects upon the general system that I have ventured here to go into this part of the subject somewhat in detail.

The affection is undoubtedly caused by chemic action due to fermentation, or rather to fermentation which has for its end the reduction of material to its ultimate analysis, which is decomposition. I regard the process of digestion as a fermentation, but the object accomplished is *re*-composition, or rendering ingested material into compounds that have for their object absorption and assimilation.

Fermentation resulting in decomposition, from the beginning to the ending of the act, furnishes abundant material which acts deleteriously upon the mucous lining of the stomach and intestines. The process is engendered by the yeast germ (torula) more frequently, perhaps, than by any other thing taken into the stomach. When food is ingested which is rich in yeast germs destructive fermentation is sure to follow, as the torula is a polymorphic creature which flourishes in solutions of sugar and pepsin, and in its mode of nutrition approaches that of animals. Its behavior so nearly approaches that of the leucocyte in nearly every way as to make it a question whether they are not identical in many if not all respects.

In this we can also include the blue mould and all similar moulds. Outside the body we see the torula living like a plant on inorganic matter, and inside the body it seizes upon all such material and organizes it into the nutrient of disease.

The first effect of destructive fermentation or decomposition is to destroy the life and continuity of the epithelial coating of the stomach and intestines from the serous layer, thus depriving these organs of all the vital essential functions that they in health perform. The delicate membrane which serves as a coating to the serous layer is denuded at the same time. Now the nerve terminals, the capillaries, and the lymph channels are exposed and are subject to chemic changes, the elements for such changes having arisen from the abnormal direction which the ingesta was forced to take under the influence of the yeast fermentation.

When the above described condition once prevails the catarrhal secretion, which, by the way, consists largely of leucocytes in various stages of change and decay, presents another element of general systemic infection. Owing to the combined influences now operative the capillaries become blocked, and the stagnated blood in such areas undergoes chemical changes which not infrequently result in actual suppuration.

This may be confined to a single gastric or intestinal gland, or it may include any number of them, thus accounting for gastric and intestinal ulcers which, more often than is generally believed, result in perforation.

Or, again, the hardening and proliferation of the connective tissue layer, under the influence of such abnormal stimuli, will frequently cause a cirrhotic condition to ensue.

Thus it will be seen that the yeast germ plays a most important rôle in the production of gastric and intestinal catarrhs, and that the remote effects chargeable directly to their pernicious presence are almost without limit. In fact this question has been seriously considered in my mind, and has forced me to the conclusion that a majority of the organic diseases are directly traceable to this particular source.

No one becomes ill at once, there is always an underlying, smouldering condition which is due to impartial nutrition. The blood plasma itself becomes insufficient in character, besides the blood stream is loaded with fermentation products, thus giving

ample scope for the now increased number of leucocytes to feed on material which is calculated to make them enormous in size, often containing more than a hundred nuclei. These, so to speak, stall-fed leucocytes discharge an element which renders the blood dark, sticky, and surcharged with fibrous factors. Capillaries in any area of the body are liable to become choked up with the overgrown and overfed leucocytes causing blood stasis. The area now becomes congested, the leucocytes find their way into tissue interstices, and when the factors present do not degenerate into suppuration there is enlargement and overgrowth. Tumor formations and the like owe their origin to this single point of departure. A detailed account of all the pathologic conditions that are logically traceable to the cause above referred to is not within the limit of intention in this paper. My object is to more especially call attention to the identity of the yeast germ and the leucocyte, which will explain a host of gastric conditions which have remained more or less obscure.

When the gastric mucous lining once becomes catarrhal, the abnormal secretion which is so abundantly poured out from it is composed largely of leucocytes which may be observed in almost every physical and vital condition, from pus to healthy active white corpuscle. Now it matters little what kind of food is ingested fermentation is sure to follow, as all the necessary factors for this process are abundantly present.

This view of the subject synthesises the diseases of the intestinal tube and makes their study readily comprehended, and, I take it, much easier studied. Each disease phenomenon can be traced to a common starting point; in fact, the pathologic condition is a simple or complex expression of the process of fermentation.

It must be thoroughly understood that fermentation does not begin and end in the intestinal tube. The moulds previously spoken of readily find their way into the blood, as also does the younger brood of torula, and find an abundance of material to act upon.

In this way the arterial blood becomes charged with alcohol and carbonic-acid gas, which quickly and certainly renders the nervous centers abnormal in action. The brain becomes hypersensitive and gives expression to underlying conditions in headache, vertigo, drowsiness, and a long train of mental and moral

symptoms which can be expressed as follows: They fear death without cause, are often inconsolable, and at times are excessively irritable, dull mental heaviness, and dislike physical exercise.

The general nervous system is now in condition to influence the organs abnormally, thus bringing about what is so often cited as the nervous factor in the production of disease.

Now, to revert to the ferments in their natural order, we have first the yeast, which is the factor in alcoholic fermentation, second the penicillium, to which acetic fermentation is due, and third the bacilli, which induce putrefactive fermentation.

The first two ferments have been sufficiently noticed, except that it is a fact that a closer relationship exists between all of them than is generally supposed.

The yeast when undergoing death degenerates into the penicillium, as can be easily observed in the sputum of consumptives; and the bacilli acting as putrefactive agents in the intestinal canal, where they produce ptomaine alcohols, and from thence into the ammonium sulphides. They thus convert the fecal matter into ultimate elements, or manure for plants; in fact they labor to furnish food suitable for their own consumption.

When constipation is not present all the bowel contents are discharged daily, leaving the canal fresh and healthy and clear of microbes other than such as are necessary to change and reduce substances that are not calculated to be used by the body into material that shall be harmless while in the tube, and to readily assist in its discharge.

While it might be interesting to continue this subject in this particular connection, I feel that the point has been reached when particular and specific disease phenomena can be taken up and argued from the premises already furnished, therefore in the next paper I will speak of tuberculosis and its relation to nutrition.

MODERN METHODS OF INTESTINAL ANASTOMOSIS.

BY AUGUST SCHACHNER, M. D., PH. G.,
Surgeon to Louisville City Hospital; Demonstrator of Anatomy, Louisville Medical College.
LOUISVILLE, KY.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

[CONTINUED FROM PAGE 261.]

"*Gastro-pylorectomy.* (Maunsell.) If the disease is confined to a very small portion of the pyloric end of the stomach, it may be excised completely.

"On account of the abnormal semi-fixed condition of the greater portion of the duodenum, the application of this opera-

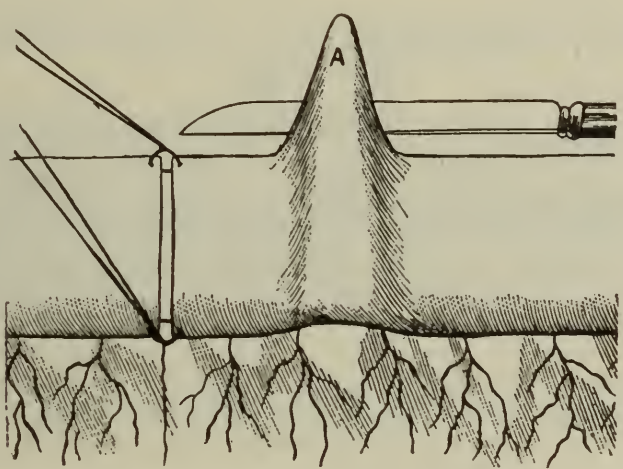


FIG. 6.—*Circular Enterorrhaphy.* Longitudinal section (about an inch and a half long) with tenotomy knife, of that portion of the larger segment of gut which is opposite to its mesenteric attachment. This opening should be made about an inch from the severed end of the larger segment of the bowel; its length depends on the size of the gut to be invaginated. In performing this part of the operation, pinch up the coats of the intestine between the finger and the thumb, and divide with a tenotomy knife or a pair of scissors.

tion is limited to cases where there is only a small amount of disease confined to the pyloric end of the stomach.

"When there is extensive disease confined to the pyloric end of the stomach and the upper portion of the duodenum, it may be deemed prudent for many reasons not to attempt the removal of the mass.

"Under these conditions gastro-jejunostomy or gastro-intestinal anastomosis may be performed in the following manner:

"1. Draw out a portion of the jejunum as close as possible to the duodenum, empty it of its contents by gently squeezing it, and apply the sponge clamps in the usual manner.

"2. Gently draw the greater curvature of the stomach into the wound.

"3. Place the jejunum along the greater curvature of the stomach and proceed to unite them in whatever position they lie naturally, with least strain or kink.

"4. The opening in the longitudinal axis of the jejunum should be slightly over an inch long and in that portion of the

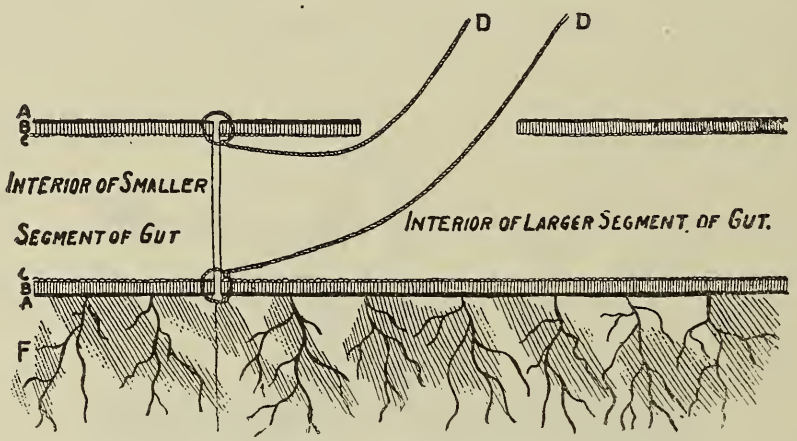


FIG. 7.—*Circular Enterorrhaphy.* Longitudinal section of gut showing: *AA.* Peritoneal coat; *BB.* Muscular coat; *CC.* Mucous coat; *DD.* Temporary sutures passed into the bowel, and out through the longitudinal slit made in larger segment of gut; *F.* Mesentery.

gut most distant from the mesentery. The corresponding opening in the stomach should be in the line of its greater curvature and one inch above it.

"5. Unite the corresponding extreme ends of the wounds in the jejunum and stomach with temporary sutures passed through the entire thickness of the walls of the stomach and jejunum, leaving the ends of the sutures long. Make an opening in the center of the stomach sufficiently long to permit the easy invagination of the corresponding openings in the stomach and jejunum.

"6. Having invaginated the two openings, sew them up all around as previously described, passing the needle through all the coats of the intestine and stomach.

"7. Now retract the firmly approximated openings to their normal positions and sew up the longitudinal slit in the stomach with a continuous suture passed through its peritoneal and muscular coats.

"Withdraw the invagination and sew up the center of the stomach with a continuous suture.

"*Ileo-colostomy.* If the diseased cecum, ileo-cecal valve and appendix can not be safely excised owing to old-standing, recurrent inflammation having firmly matted the bowel to the right ureter and iliac vessels (as I have seen on several occasions), perform ileo-colostomy.

"1. Empty the diseased cecum and colon end of ileum.

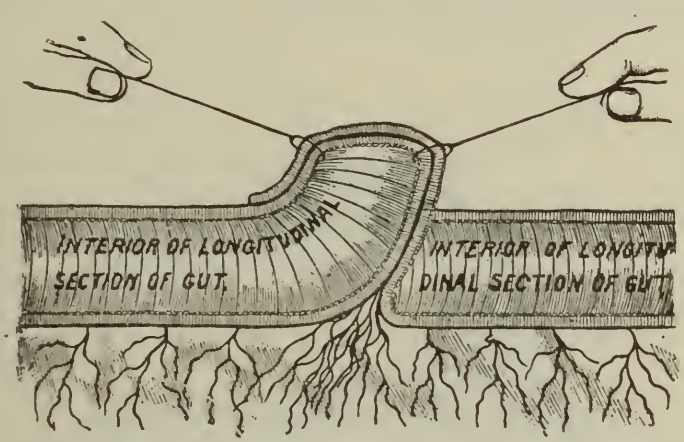


FIG. 8.—*Circular Enterorrhaphy.* Longitudinal section of intestine, showing the relative position of the different layers of the bowel invaginated at the longitudinal slit.

"2. Apply the sponge clamps to the healthy ileum and colon four inches off the disease.

"3. Invaginate the cut end of the ileum attached to the cecum and sew it up with a continuous suture.

"4. Make a slit on the convex surface of the colon sufficiently long to just receive with very slight constriction the cut end of the ileum; secure with two temporary sutures, leaving the ends long.

"5. Make a slit in the colon an inch higher up or an inch lower down in the cecum, whichever is most convenient for the invagination.

"6. Pass a dressing forceps through the slit and seize the two ends of the temporary sutures.

"7. Drag the invaginated cut end of the ileum and its corresponding opening in the colon out through the slit.

"8. Suture carefully all around and pull back to its normal position.

"9. Sew up the longitudinal slit with a continuous suture.

"Clamp the ileum and colon; completely excise the diseased cecum and appendix.

"Insert the cut end of the ileum into the healthy colon two inches above its cut end. Apply the two temporary sutures and invaginate them through the cut end of the colon; sew up all around; withdraw the invagination. Finally close the cut end of the colon with a continuous suture, having invaginated it within itself to the extent of an inch.

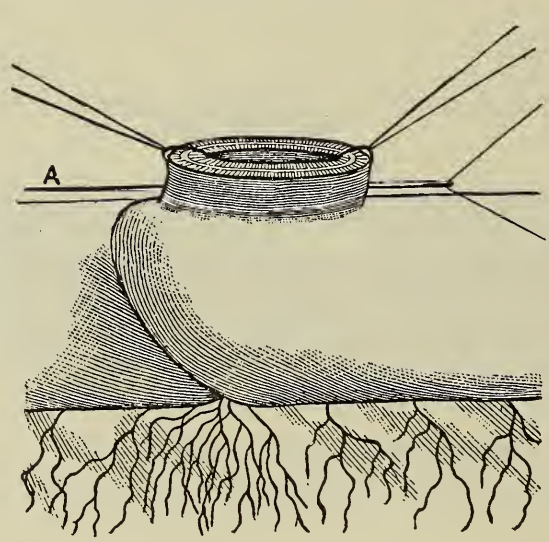


FIG. 9.—*Circular Enterorrhaphy.* Invaginated gut, showing the two peritoneal surfaces in juxtaposition all around. *A.* Needle passed through both sides of the bowel, including all the coats—introducing two sutures with one passage of the needle.

"*Ileo-sigmoidostomy.* This operation may be performed where the seat of obstruction is located low down in the colon near the sigmoid flexure. An artificial anus leaves a man in a loathsome condition, and should only be made in cases of obstruction from disease below the sigmoid flexure of the colon." (*American Journal of Medical Sciences,* Vol. 103, p. 245.)

In describing Jessett's operation I take the liberty of borrowing the author's description as given in his article upon ileo-colostomy and gastro-enterostomy respectively in the *Lancet,*

February 14, 1891, and October 14, 1891. In his description of the ileo-colostomy he remarks:

"On August 3d, with the assistance of Dr. Hayes and Dr. Purcell, Dr. English giving the anesthetic, I opened the abdomen by an incision about three inches long over the right linea semi-lunaris, all bleeding points being caught with pressure forceps. I opened the peritoneum along the whole length of the incision, and immediately came down upon a large mass of disease extending from the cecum nearly as high as the transverse colon. It being quite impossible to remove this, I determined to divide the ileum and implant the proximal end into the transverse colon. Passing the index finger of the left hand along the inner side of the cecum, a portion of the ileum close to the ileo-

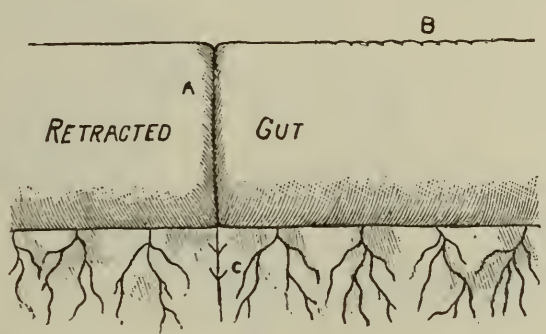


FIG. 10.—*Circular Enterorrhaphy.* *A.* Line marking junction of both ends of bowel, the peritoneum well turned in, and the sutures and knots all inside the gut, making an almost invisible air- and water-tight joint; *B.* Longitudinal slit in bowel, sewn up with continuous suture; *C.* Sutures in the mesentery; seldom necessary to put more than one or two.

cecal valve was easily drawn out of the wound. I then passed two pieces of india-rubber cord tightly around the intestine, about four inches apart, the piece on the distal end being placed about two inches from the ileo-cecal valve. I next divided the intestines completely across between the two india-rubber ligatures, caught up and ligatured all bleeding points and washed the divided ends thoroughly. The cut end of the distal part of the ileum was inverted and closed by stitching together the peritoneal covering with a fine silk suture.

"The next step in the operation was to line the proximal end of the divided intestine with a thin band of india rubber, about half an inch wide, which was fastened by a continuous catgut suture to its cut edge. Two chromatized catgut sutures, about

eighteen to twenty-four inches long and armed at each end with a needle, were next passed through the india-rubber band and all the coats of the intestine from within outward. The posterior threads were passed one on either side of the mesentery, and the anterior threads at equal distances apart through the convex surface of the bowel. A portion of the transverse colon was next brought out of the parietal wound and a longitudinal incision made in its convex surface. The long sutures connected with the ileum were then passed through the serous and muscular coats of the colon, the anterior threads about half an inch apart at the end of the opening in the colon, and the posterior threads at a similar distance at the other end. The open end of

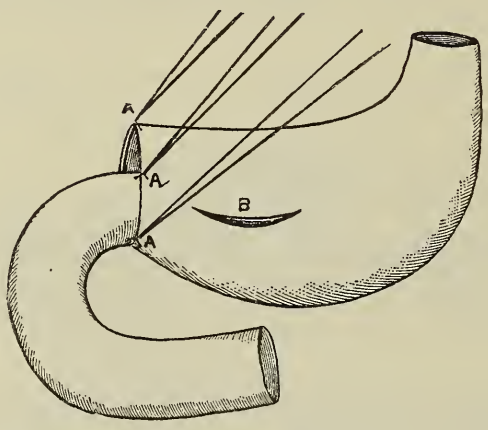


FIG. 11.—*AAA*. Temporary sutures with ends intact, uniting cut surfaces of stomach and pylorus; *B*. Longitudinal slit in stomach made by pinching up its coats between the finger and thumb, and transfixing with a tenotomy knife. Through this opening the invaginated cut ends of the pylorus and stomach are passed, when they can be sewn up from the inside and then retracted to their normal position, the longitudinal slit being sewn up with a continuous suture. (Maunsell.)

the ileum was then thrust through the slit and the sutures firmly tied, thus preventing the possibility of the bowel slipping out; two Czerny-Lembert sutures, one on each side, were introduced, passing through the serous and muscular coats of the colon and small intestine, and tied firmly. An omental flap was finally fastened round. The parts were thoroughly cleansed and dropped back into the abdomen and the parietal wound closed and dressed in the usual way. The operation lasted about one hour.

"The patient stood the operation very well, and was returned to bed and ordered to be fed with nutritive enemata and zyminized meat suppositories for the first twenty-four hours.

"August 4th. Motion passed naturally by the rectum to-day, and continued to do so daily. No tenderness over the abdomen, excepting over the original tumor, the outer and lower side of which is brawny, and had all the appearance of deeply seated cellulitis.

"August 5th. I visited the patient with Dr. Hayes, and found the bowels had acted naturally and well and the wound looked healthy. A large abscess was pointing at the upper part of the thigh; this was freely opened, letting out a large quantity of stinking pus; this was kept syringed out and drained. The patient takes his nourishment well, and is kept up with brandy, champagne, beef tea, etc. The patient had not sufficient vital

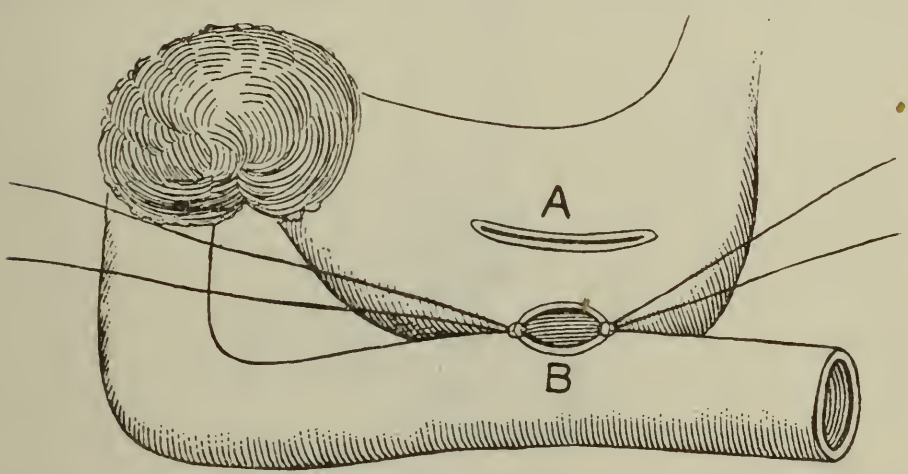


FIG. 12.—A large cancerous mass involving the pyloric end of the stomach and the upper part of the abdomen. *A*. Opening in the center of the stomach (where the vessels are very small) through which the corresponding openings (united by temporary sutures, *B*), made in the longitudinal axis of the upper end of the jejunum and in the line of the greater curvature of the stomach, may be invaginated and sutured round in the usual manner from the inside. (Maunsell.)

power left to resist the constant drain of the abscess, and died on August 16th, thirteen days after the operation.

"*Remarks:* Had this patient been operated on earlier I am convinced that his life might have been materially prolonged. So far as the operation was concerned it was all that could have been desired. There was no peritonitis, and feces passed freely from the day of the operation until his death, nearly a fortnight after. This being the case, this operation must commend itself to all surgeons as being far preferable to any operation which has

for its aim merely the formation of an artificial anus or a fecal fistula. In my experimental research, published in July, 1889, I had not one death after the operation I have described."

The details of his gastro-enterostomy, given in his own language, are as follows:

"Operation, August 4th. Two hot-water cushions being placed on the table and covered with warm blankets, and the patient being placed thereon, Dr. English proceeded to administer ether, and Mr. Elam kindly assisted me in the operation. An incision three inches long was made in the middle line from the

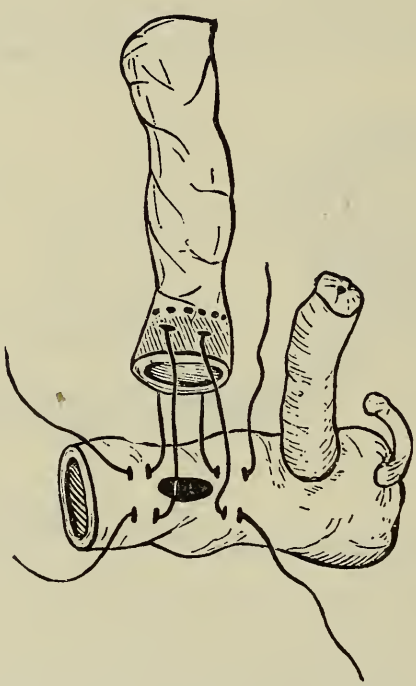


FIG. 13.—Jessett's Ileo-colostomy.

umbilicus upward through the abdominal parietes, which were so very thin that the peritoneum was cut down upon directly, and no bleeding points required catching. The peritoneum was divided the whole length of the parietal incision and caught in three places on each side with pressure forceps. The tumor in the] pylorus was seized and readily brought out through the wound. It being found to be perfectly free from all surrounding organs I determined to remove it. A cloth wrung out in warm carbolized water was packed around the growth, which was found to extend for about four or five inches along the walls of the stomach. I next, with an aneurism needle armed with a

No. 1 chromic gut, ligatured the vessels running along the larger and smaller curvature of the stomach, a little to the left of the point at which I proceeded to make the section, and with a pair of broad ligament forceps I clamped that portion of stomach on the duodenal side of the proposed section. I then tore through with my finger the lesser omentum, and, Mr. Elam firmly holding the stomach, I proceeded to cut it across between his finger and the clamp forceps with scissors, catching up each bleeding point as it was divided with the pressure forceps. The growth with the pylorus being thus severed from the stomach was allowed to hang loosely out of the wound, covered with a cloth soaked with warm carbolized water. The vessels in the divided edge of the stomach were now quickly ligatured with catgut,

FIG. 14.—Jessett's Ileo-colostomy.

and as it was found that there was a quantity of fluid in the stomach, this was carefully siphoned off by means of a rubber stomach-tube and washed out. The edges of the stomach were next united by means of a continuous chromatized catgut suture passing through all its coats. A second line of quilt sutures of No. 1 chromatized gut were now passed through the serous and muscular coats about an eighth of an inch from the edges; the ends of each pair of these sutures when passed were secured by clamp forceps, to allow of all the sutures being inserted before tying. Nine of these sutures were introduced in all; as each of these were tied care was taken to thoroughly invert the cut edges of the stomach so as to assure a good surface of peritoneum being approximated. When all these sutures were tied and the union appeared complete, I allowed the stomach to drop back into the

abdomen. I next passed an india-rubber ligature lightly around the duodenum about two inches from the pylorus, and clamped that portion of the duodenum close to the pyloric orifice with the forceps, and divided it between the forceps and the elastic ligature, leaving as much of the duodenum as I could with safety. The pylorus and growth were now free excepting at their attachment to the great omentum. This I transfixed with No. 4 Chinese silk and ligatured in the same manner as an ovarian pedicle, and removed the growth by cutting the omental attachment across with scissors. The divided end of the duodenum was then united by means of a continuous chromatized catgut suture passing through all its coats and a second row of quilt sutures of No. 1 chromatized gut, in the same manner as that described for

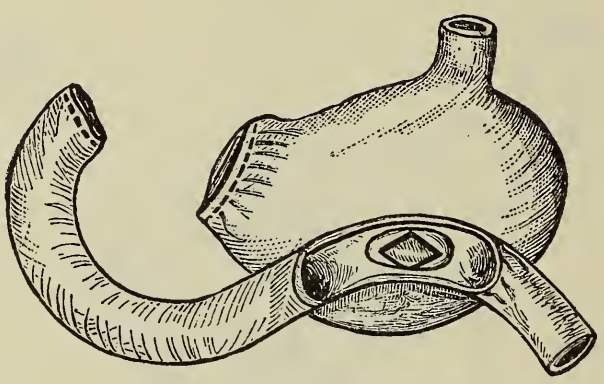


Fig. 15.

the union of the divided end of the stomach, and allowed to drop back. The rubber ligature was now removed from the duodenum, a sponge was introduced into the cavity, and the first part of the operation thus completed.

"I then proceeded to perform gastro-enterostomy. I first pushed the transverse colon and omentum over to the right and passed the index finger of my right hand over it, and caught up a loop of the jejunum close to its origin and drew it out through the wound. The stomach was again withdrawn and an opening made into it about an inch and a half long, parallel to and about an inch from the parallel curvature and two inches from the divided end. A decalcified bone plate, threaded with two lateral chromatized catgut ligatures and two longitudinal No. 1 silk ligatures, was introduced. The lateral ligatures were passed through all its coats about an eighth of an inch from the divided

edge. The ligatures were given to an assistant to hold, while I proceeded to introduce a similar bone plate into the jejunum. Before doing this two india-rubber ligatures were passed round the intestine almost four inches apart and fastened lightly. An opening in a longitudinal direction, about an inch and a half in length, was made in the convex surface of the jejunum between the india-rubber ligatures, and a bone plate introduced, the lateral catgut sutures being passed through all the coats of the bowel. The two plates were now held in accurate apposition by Mr. Elam, while I tied the corresponding ligatures of the two plates. In tying the upper lateral ligature a considerable portion of mucous membrane prolapsed and was with difficulty got into place, so I cut it off with scissors, after which the upper edge was readily made to go into its proper position. A row of quilt sutures, five in all, were introduced along the upper edges and ends of the plate, and the parts, being thoroughly cleansed, were dropped back. The sponge which had been placed at the cavity left by the resection of the pylorus was removed and, all being dry, the abdominal wound was closed with silk-worm gut sutures in the usual manner, the wound dressed with sublimate gauze, and a large pad of wool and a many-tailed bandage firmly applied. The patient was then returned to bed.

"The patient bore the operation exceedingly well; the only time that her condition appeared to give anxiety was after the division of the stomach and stitching up the duodenal opening. During the latter part of the operation she rallied a great deal. The operation lasted one hour and forty minutes. The portion of stomach and pylorus removed measured about six inches in length and four inches from above downward at the gastric end. The specimen was shown at the Clinical Society with the patient. It contained a mass of growth which was firm and not ulcerated, and which almost completely obstructed the orifice of the pylorus. There were no adhesions. The patient made a good recovery."

Paul describes his method as follows:

"The bowel being ready to receive the tube, its full length is introduced into the proximal end, the cut margin of which is sewn to the tube through the perforations with a fine, continu-

ous chromic gut suture (*B*). For this purpose a sewing-needle is used, which, in passing, is made to dip more deeply into the mucous than the peritoneal coat. It is not sufficient to take the muscular and mucous coats only, as the attachment to the tube is then not sufficiently secure. When sewing the mesenteric border of the bowel to the tube care should be taken to pick up

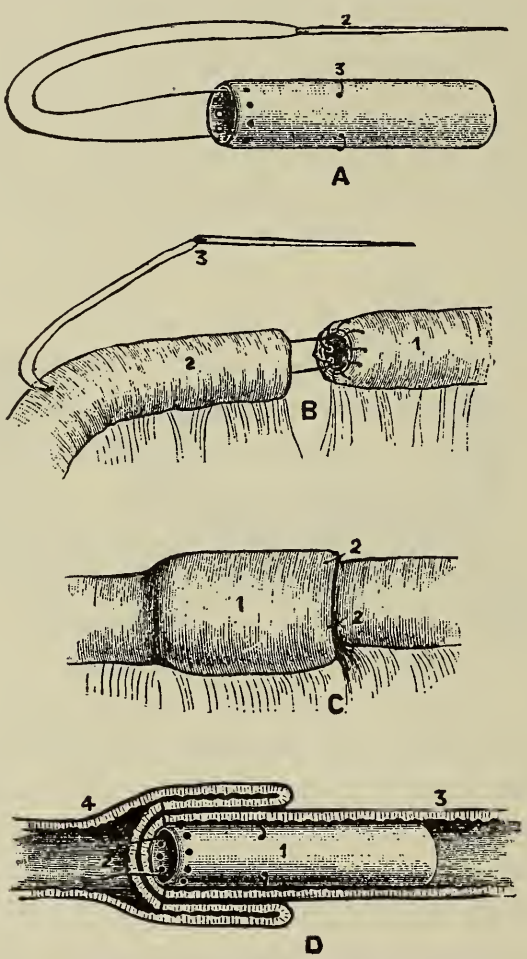


Fig. 16.

the severed edges of the mesentery with the point of the needle, as this is the point most likely to give way, and the mesentery should not be allowed to drag in the least degree from the cut edge of the bowel. Next, the needle of the traction thread is slipped along a director about three inches down the distal segment of the bowel and pushed through its wall. Then the distal is sewn to the proximal end by a chromic gut suture all around, the needle piercing the musculo-serous coats only, great care

again being taken to fix the mesenteric edge securely. With the same thread the opening in the mesentery can be drawn together. Now an assistant takes the traction threads and steadily resists the operator as he draws the distal end of the bowel back over the tube, thus invaginating the proximal end and producing the appearance seen in Figure 16 (*c*). The parts are retained in position by a few Lembert sutures, one on either side of the mesentery, and others as they appear necessary. Lastly, the traction sutures are cut off and the openings closed with Lembert stitches. For the human bowel I have had made tubes one and one half inches long, with diameters varying from one half inch to three fourths inch and one fourth inch in thickness." (*London Lancet,* May 30, 1891.)

In closing I beg leave to submit for further consideration the following conclusions:

1. The highest degree of vascularity in the intestine is in the region of its mesenteric border, and the lowest degree is at a point just opposite the mesenteric border.

2. The highest degree of vascularity in the stomach is along its curvatures, and the lowest degree is at a point midway between its curvatures. Throughout the entire intestinal tract there is an absence of the serous coat at the mesenteric border.

3. In view of the diminished vascularity and the constant presence of the serosa at a point midway between the curvatures in the stomach and opposite the mesenteric border in the intestines, these regions should be regarded as *the lines of safety,* and when permissible should always be given the preference in all operative measures.

4. The dangers of sepsis, hemorrhage, peritonitis, and non-union increase in direct ratio as we recede from the lines of safety.

5. The strength of a continued or Glover's suture is measured practically by its weakest stitch; if this tears, the remaining stitches are all more or less loosened and the end nearly always defeated.

6. Barring certain exceptions the continued or Glover's stitch is the most rapid, most uncertain, and most uneven stitch that can be applied.

7. No method of intestinal resection, however simple it may be, will receive full justice in the hands of even the most

ingenious surgeon at its first performance. For this reason it should be the duty of all those expecting to engage in such work to thoroughly train themselves in intestinal operations in a practical way, either on lower animals or upon the dead subject.

8. The end-to-end method of restoring the continuity of the intestine in resections is attended with the least contraction and affords the most natural restoration of the intestinal canal.

9. The opening in all lateral anastomoses should be abundantly large (four inches) to allow for subsequent contraction, which always takes place to a considerable degree.

THE LENGTH OF THE SMALL INTESTINES IN ONE HUNDRED AND THIRTEEN CASES.

BY BYRON ROBINSON, M. D.,
Professor of Gynecology in the Post-Graduate Medical School.
CHICAGO, ILL.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The small intestines is generally understood as the jejunum and ileum. There is no sharp division between them and no difference in structure. Jejunum signifies empty, and ileum, flank. There is a difference in position between the jejunum and ileum, but that difference has no distinct or constant physical relation. It appears that it was Winslow who named the upper two fifths of the intestines the jejunum and the lower three fifths the ileum. The intra-abdominal pressure, which is muscular tension, compresses the intestinal loops into a packet so that no empty spaces remain between the clefts. The following records indicate the length of the small intestines from anatomists for the past one hundred years. Horner gives twenty-four to twenty-eight feet if attached to the mesentery, but thirty-four feet if cut away. Cloquet gives its length as four or five times the length of the body. Luschka observes that its average is twenty-five feet, its extreme length is thirty-four feet. Wilson notes twenty-five feet. Treves gives for males twenty-two and a half feet, and for females twenty-three feet. He gives as extremes in the male thirty-one feet ten inches to twenty-five feet six inches; in

females from twenty-nine feet four inches to nineteen feet and ten inches. Gegenbaner, five and one half to six and one half meters. Meckel says it varies from thirteen to twenty-seven feet. Cruveilhier gives twenty-five feet. A 1792 treatise reports that the intestines are six times the length of the body. Van Behr says the mesenteric (small) intestine is nineteen feet, and Morton says it is twenty-five feet. DeBierre gives eight meters. Krause, thirteen to twenty-six feet. Henle gives five and one half to six and one half meters. Quain asserts it averages twenty feet. Weber gives it eleven meters. Gray indicates twenty feet. Sappey says "its absolute length is seven meters." Huschke (1844) says, "In general is the small intestines three to five times longer than the entire body." Abey says they are five to six times the length of the body. McClellan gives twenty feet. Pancoast's Wistar, twenty feet. Testut, six to eight meters. Brinton (in Todd's Encyclopedia), twenty feet. Allen, twenty to twenty-five feet. Hyrtl says about fifteen feet. By observing anatomies published during the past one hundred years it will be noted that the two Meckels (father and son) have been followed as leaders to a great extent. There is no rule which I have been able to discover to apply to the relative length of the body and intestines. Meckel says that the intestines generally are three to ten times the body's length, and in humans five to six times the length, and most anatomists have been content to follow him. For, since Meckel's day, I do not find any definite individual records of intestinal measurements until 1859, when Brinton measured forty subjects. Cruveilhier measured some, but does not state the number. In 1885 Treves measured one hundred subjects. My measurements include nearly one hundred and fifty human subjects, besides some measurements on the horse, dog, pig, cow, sheep. The length of man's small intestines stands midway between the short flesh-eaters (carnivora), muscular intestines, and the long plant-eaters (herbivora), wide, thin intestines. I am unable from lack of records to give any national differences in the length of the small intestines. However, Huschke asserts that the intestines of the French are shorter than those of the Germans on account of the nature of food eaten by those people, and I have heard it stated that the Russians have still longer intestines than the Germans. It is reasonable to suppose that

the length of the intestines depends on the kind of food eaten, but to produce perceptible changes in the length ages would doubtless be required in a definite kind of diet.

The small intestines have no special regard to the height, weight, age, or obesity in the adult, but it has a general relation. Similar testimony has cropped out for nearly one hundred years among anatomists. In my investigations the measurement of the intestines was taken while they were lying in the abdomen and still attached to the mesentery. By cutting the small intestine away from its mesentery over six feet would sometimes be found added.

A consideration of the varying length of the small intestines in the human must be based on early infantile development. For we found that the adult intestine could vary twenty-one and one half feet. The longest was thirty-two feet and the shortest ten and one half feet. Twenty-one and one half feet is a long piece and a large tract to vary, especially when it is known that the small intestine is the business portion of the digestive tract. Dr. Lucy Waite and I measured quite a number of the small intestines of newly-born infants. We found that the small intestines averaged about ten feet at birth, but they measured as short as six and one half feet and as long as twelve feet, yet the measurements were quite constant between nine and ten feet.

Now, referring to my notes on autopsies of children after birth, we may note: A child, eighteen months old, male, small intestines eighteen feet; child, male, eight months, small intestines fourteen feet and four inches. It is shown from autopsies on children that the small intestines take on a rapid growth immediately after birth. The reason of this is the mechanical irritation of the intestinal mucosa attracts large quantities of blood to the parts. The repeated reception of blood and repeated attraction of rich blood to the mucosa excites peristalsis, also aids growth. So that if a child has a large nervous system, as it generally does, and large blood-vessels and rich food, the small intestines grow astonishingly rapid. Treves asserts that the small intestines may grow two feet a month. Though this is a little more rapid than my observation would report, yet the intestine will no doubt grow more than twelve inches in a month succeeding birth. Estimating from a normal nervous and vascular

system, and with sufficient quantity and proper quality of food, the intestines would not vary much in adult life. For it is quite probable that in infancy and in childhood is the period of real intestinal growth.

Now, how shall we account for the immense variation in the length of the intestines, as we noted twenty-one feet of variation in adult humans? The most rational view is that of deficient nourishment and disease in childhood. The assimilating of proper food at the proper moment seems to tell the story of the length of the small intestines. The proper time is early infancy. If a child does not receive sufficient nourishing food, or is attacked with indigestion, he may lose the growth of several feet of small intestines in a few months; and from some observation of bowel growth it would appear to me that this deficient growth was never made up in any other period. Supposing that one infant's intestines grow at the rate of eighteen inches a month, which my investigations on infants indicate, it becomes ill or receives non-nourishing food, and suppose that disease or improper food checks ten to twelve inches of growth of the bowel a month, it will not require long to lose the growth of several feet of small intestine. It is not infrequently that infants suffer indigestion for six or eight months. This supposition is not so far-fetched when it is known how much the infants of the poor are subject to the changes of food fortunes—now excess (indigestion), and now deficient (starvation). All improper changes in food, excess, deficiency or improper quality, induce vascular disturbances which disturb bowel growth. Bowel growth must be looked on as a different matter than general body growth. Bowel growth is purely local, on account of local changes induced by mechanical irritation of the intestinal mucosa, so that the cause of the great variation of the length of the small bowel in man, amounting to over twenty feet, in my opinion must be sought for in early infancy, and its base is nourishment and enteritis. The unfortunate fluctuation of blood and the consequent fluctuations of vascular changes, which so frequently occur among infants of the poor and rich, tell a wondrous story on the length of the small intestine. Perhaps a normal nervous system, with a normal vascular system and normal digestion, would produce almost uniform lengths of small intestines. It would be interesting to know

whether the same wide individual variation of the length of the small intestines obtained among animals. A man with a short intestine has not such a perfect assimilator as one with a long intestine, and, besides, a long intestine economizes and utilizes food.

The positions of the small intestines are not anatomically constant. Adjacent loops have no definite relations with each other. Two loops in contact may be adjacent or may be ten feet apart. The position of a loop in the abdomen gives no certain clue as to its exact position in the line of the bowel. Hence in intestinal surgery the position of the loop can not be relied on for distinct gut location. Therefore the situation of a loop in the abdominal cavity can not be relied on to locate its position at any point or section of the small intestines. In general the small intestinal loops are located in the left side of the colonic square. The coils consist of an irregular packet extending along the left lumbar region into the left illiac fossa and finally into the pelvis. These loops extend from the left transverse colon irregularly along the left side into the pelvis, like the frills of an old-fashioned collar. The coils of different individuals not only differ, but the coils of the same individual change position from time to time to accord with the passing gas and fecal matter. It is well in general to remember that the small intestinal coils lay to the left iliac region, as it makes a vast difference where a bullet penetrates an abdomen and in which direction it takes as regards the coils of the small intestines. I shot some sixty dogs to test the effect of a bullet passing through the abdomen, with especial regard to position. A bullet shot through the abdomen from side to side will frequently perforate eight to twelve holes, but if it is shot in the anterio-posterior direction it may not cut a single hole in the bowel.

The loops of small intestines may extend over to the right of the vertebral column, and I have even observed a perforation in a loop of small intestines which lay over the pelvis of the right kidney from a tubercular ulcer. To secure the best view of the position of the loops of the small intestine, a spare cadaver with empty intestines, frozen, serves the best purpose. The shape of the small intestine is that of a truncated cone with its base at the flexura duodeno-jejunalis. The walls of the cones become thinner from the base to the apex.

The small intestines have two margins. One margin is concave and the mesenterium is attached to it. It is termed margo mesenterialis. In this margin come all vessels and nerves; and if this margin be shot away to any definite extent it will be followed by gangrene of the intestine. The other margin of the small intestines is convex. It is most distant from the renal neuro-vascular visceral pedicle, the mesentery. It is the free border, and is known as the margo intestinalis. This border may suffer extensive injury without producing gangrene of the gut wall.

The variable position of the small intestines depends on variable forces, as peristalsis, emptying and filling of the stomach, bladder, and uterus, the development of gases, and filling and emptying of the rectum, respiration and position of the body, active movements and attitudes of the body. The emptying and filling of a large sigmoid and cecum would influence position.

The measurements of the length of the intestines were performed on adult cadavers, just as they came, in the Cook County Hospital. There were one hundred and thirteen adult subjects measured consecutively; eighty-seven were males and twenty-six females. The intestines were measured without being removed from the body. One foot was allowed in every body for the duodenum. The average length of one hundred and thirteen cases was exactly twenty-one feet. The longest small intestine measured thirty-three feet, the shortest was eleven feet. The highest variation was twenty-two feet, a variation equal to a normal intestine. In the eighty-seven males the average length of the intestine was twenty-three feet and three inches. The longest was thirty-three and the shortest was twelve feet six inches. In the twenty-six females the average length of the small intestine was eighteen feet. The longest was twenty-nine feet and the shortest was eleven feet. These cases revealed that the male small intestine was five feet three inches longer than the female. The report would be in accord with the size and weight of the male and female body. But the labor does not accord with other investigations. However, all these cases were measured alike with no reference to the outcome. The number is of course insufficient to create a reliable base, and yet it shows the tendency of physical conditions as regards weight and size of human bodies.

In regard to the length of the mesentery, the average of one hundred and thirteen cases was almost exactly seven inches. (Some years ago I obtained in Toledo Medical College an average mesentery of six and one half inches from the examination of quite a number of cadavers.) In the eighty-seven males the mesentery measured seven inches. The longest was ten inches and the shortest was five inches. In the twenty-six females the average mesentery measured seven inches. The longest was eleven inches and the shortest was five inches. I think that the half-inch increase of mesentery of my last measurements was due in general to the subjects being some older than the previous ones. It may be stated in general that the mesenteries begin to increase at forty years of age, perhaps at thirty-five years of age; that is, visceral prolapse begins at thirty-five and the mesenteries or visceral pedicles increase in length.

The measurements of the small intestines show that in adults the length has no particular regard to weight, age or height. But in general, the male being larger, the small intestines is in general longer in the male than in the female. Occasionally we removed the intestines from the body and measured them, when it was found that they would increase from three to six feet.

MECHANICAL DEVICES IN INTESTINAL SURGERY.

BY BYRON ROBINSON, M. D.,
CHICAGO, ILL.

[Written for MATHEW'S MEDICAL QUARTERLY.]

From 1887 to 1894 I made nearly two hundred and fifty experiments on the dog's digestive tract to test the utility of the different intestinal sutures or mechanical aids for intestinal anastomosis. I began early with Senn's and Connell's decalcified bone plate. They are dear and difficult to make, so I abandoned them then for the cartilage plate, which was suggested to me while examining the non-calcified scapula of a heifer three years old. I began using the cartilage plates on dogs, but they absorbed so quickly that some of the dogs died because the cartilage plate did not hold long enough in close approximation the intestinal

surfaces. In short the cartilage plate was absorbed or digested too rapidly, and lateral perforation arose in the bowel anastamosis. Dr. Stamm, of Fremont, Ohio, independently invented and used the cartilage plate at the same time. I then abandoned the cartilage plate. I next invented and used the raw-hide plate. It is an excellent device, but requires time to secure and prepare. I simply took the raw hide and shaved the hair off, cut it in the desired shape, and armed it with six sutures and it was ready for use. I consider it well suited for intestinal anastomosis. I have used the catgut mats of Davis, Mata's device, Abbe's catgut rings, Murphy's button, and the segmented rubber ring of Brockaw. But I consider the segmented rubber plate as good as any, and I still employ it in my hospital work. I have used it several times on humans, and it produces excellent results. The last time I employed segmented rubber plate was on Mrs. R., sent to me by Drs. Fruth and Henry, of Ohio. The patient had pyloric obstruction for about a year. I performed gastro-enterostomy, assisted by Dr. Henry and Dr. Lucy Waite. I introduced the plates into the jejunum and stomach, approximated and tied them together after scarifying the surfaces of the intestine and stomach. I wrapped some omentum around the approximated circumference of the jejunum and stomach for a graft. The patient recovered without any untoward symptoms. She passed three pieces of the plate on the seventeenth day. The fourth piece we never found. She went home from the hospital some four weeks after the operation. I have used the button with much care and had subsequent death from several lateral perforations, so that now I always employ the segmented rubber plate for gastro-enterostomy; at least one can make the plate of any desired size, as I demonstrated amply in my two volumes of "Practical Intestinal Surgery," published by G. S. Davis in 1891, that the aperture in gastro-enterostomy would contract from $\frac{1}{6}$ to $\frac{3}{4}$ of its original diameter in six weeks. Hence I make the aperture between the stomach and jejunum two inches long at the most pendent portion of the stomach, so that exit of the stomach contents is facilitated, and the aperture is also kept open by fluids trickling over the edges of the wound. I still use the segmented rubber plate, having six sutures armed with six milliner needles, scarification for the approximating peritoneal

surfaces, and the good old omental graft (severed or unsevered). These, after repeated trials on dogs, demonstrated their usefulness, and they have proved successful on every human on which we applied them. So far I am especially well satisfied with the rubber plate in gastro-enterostomy. I have not used Dawbarn's potato plate, nor Von Baraez's turnip plate, nor am I likely to employ either when I found by actual experiment that the cartilage plate was absorbed or digested so rapidly that dogs died from lateral fistulæ in the anastomosis parts, owing to insufficient duration of firmly approximated surfaces.

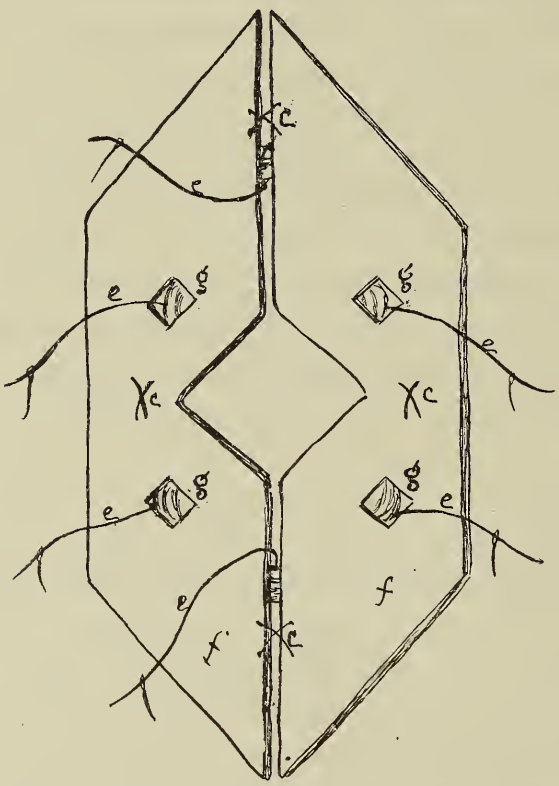


FIG. 1 represents the face of the segmented rubber plate for intestinal anastomosis; *c c c* and *c* mark the points where the catgut sutures stitch the sheepskin ring to the rubber bands, *f* and *f*, composing the plate; *e* indicates the six sutures armed with six needles; *g* notes the two lateral holes in the plates. The two end sutures appear between the edges of the rubber bands. The plates of course can be made of size to suit the occasion.

To make the segmented rubber plates, take two pieces of rubber bands two and a half inches long and three fourths of an inch wide, such as is often used to bind notes or envelopes together. With the scissors cut off the corners (as in Figure 1),

and then cut out a triangular piece from the middle of the band on the opposite edge. Now cut out two round holes at the distance of one half inch apart on the side, make the two lateral holes about the size of buckshot. The holes are made large so that the part of the ring with the linen thread will easily pass through. No holes are required at the ends of the plates, as the sutures can pass between the opposing edges. Now take a piece of sheepskin (euphoniously called chamois skin) and cut off a long strand, similar to a shoe-string in size, and make a ring of it by twisting say three strands together. Make the ring of desired

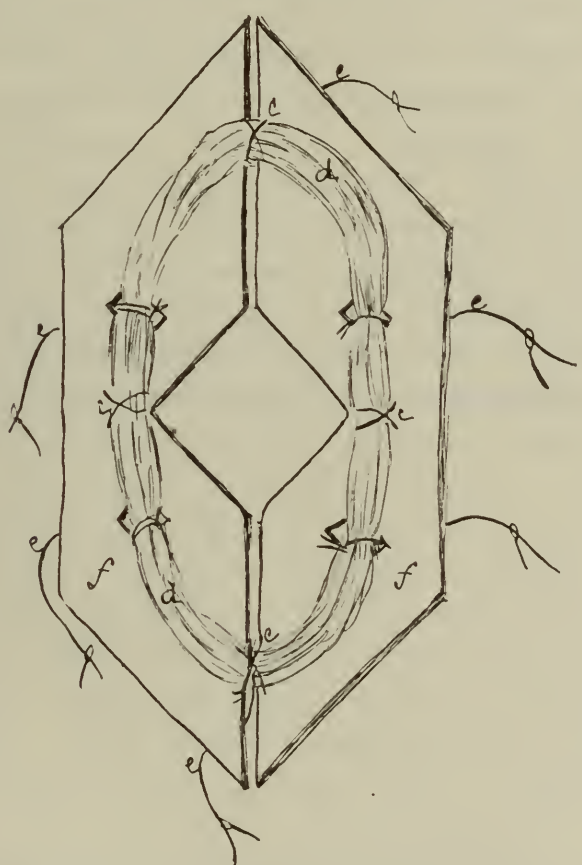


FIG. 2 shows the back of the segmented rubber plate for the intestinal anastomosis; *f* and *f* indicate the two pieces of rubber band composing the plate; *d d* marks the sheepskin ring stitched onto the rubber bands at *c c c* and *c* with catgut; *e* marks the six sutures armed with six needles. The aperture to allow fecal circulation can be made of any size as well as the plates. This plate is about the proper size to use in the small intestines of any adult human.

size, say two inches in diameter, then stitch this ring of sheepskin to the rubber plate with four catgut sutures (Fig. 2). One suture between each of the lateral holes in the rubber bands and one

suture at each end. Finally, loop the six linen (Barber's linen thread No. 40) sutures on the ring armed with six milliner needles and the plate is ready for use. This is an ideal plate for intestinal anastomosis, for one can make it so that it will break down at any desired time; perhaps five days is a fair estimate of a reliable plate. It can be so constructed as to last two weeks if necessary. It is an ideal plate, as it does its work and breaks down when desired. It does not make subsequent intestinal obstruction. The parts of the plate are really held together by catgut only, and then absorption of the catgut does not destroy the efficiency of the plate when it is once adjusted, for the efficiency of the plate depends on the sheepskin ring. The four catgut sutures may be all absorbed in a day, but the ring still holds the plate in proper adjustment. The plate is easily introduced, as it is pliable and limber. It is amply stiff enough to hold in proper approximation the opposing intestinal surfaces until union is consummated. Its edges are not so rigid as to gangrene the bowel wall should it rest against it. With a graft it has proven, in my experience of five years, an excellent, cheap, easily accessible, quickly constructed, useful plate for intestinal anastomosis.

Clinical Memoranda.

A CASE OF SIGMOIDITIS.

BY HENRY E. TULEY, A. B., M. D.,
LOUISVILLE, KY.

[Written for Mathews' Medical Quarterly.]

The importance of a close scrutiny of all the symptoms presented by patients and the difficulty often of recognizing obscure lesions, as evidenced by the following history, is sufficient warrant for its report.

Mrs. S. was first seen March 26, 1895. She is married, with one child about twelve years of age. For several months before coming under my observation she had been in poor health, and some weeks previously had been under treatment for some uterine trouble by another physician.

Her most prominent symptom, and the one from which she sought relief, was constant backache, severe enough oftentimes to incapacitate her for her household duties.

Close questioning revealed the fact that she had been having trouble with her bowels for some time. About twice or three times a week she would have a medium-sized, formed movement early in the morning, with apparent relief, but in half an hour or an hour they would begin and move five or six times in a short space of time. These would be small and thin, containing scybala and quantities of mucus. There was no straining or passage of blood, but the frequency of these movements would leave her weak and depressed, compelling her to lie down for several hours. Her appetite was poor, and what she ate gave her considerable distress, nausea and eructations following; her diet latterly consisted of milk, even the sight of food being repulsive. She had lost several pounds in weight and her color was sallow.

She had an irritable cough, which, in connection with her loss in weight, made her apprehensive that some serious pulmonary trouble might be present, but a careful examination of her chest showed the cough to be reflex.

Suspecting the colon as being the chief seat of her trouble, she was directed to remain in bed during the course of treatment, but, as she strenuously objected to this, a compromise was made, and she went to bed in the early part of the afternoon before a treatment was given, and remained there until the following morning.

She was directed to drink more freely of water, and was given elixir of cascara sagrada (Wyeth) in drachm doses twice daily. On every other day the treatment recommended by Mathews for sigmoiditis was instituted, namely, fluid hydrastis was injected into the sigmoid through a Wales bougie No. 5, after the lower bowel had been thoroughly emptied by a high enema of warm water.

It was noted at each treatment that the end of the bougie would be coated with a thick, tenacious mucus, and much mucus was passed in the water of the enema.

For two weeks improvement was very slow, the backache still persisted, but the interval between the irregular stools was lengthened, otherwise her condition was the same; and there was no improvement in her appetite, with the same distress after eating.

At this juncture she was put on maltine with coca wine, and the emulsion of iodoform was substituted for the hydrastis in the local treatment of the sigmoid, as follows:

℞ Iodiform ..... ʒiij;
Bismuth sub. nitr..... ʒss;
Almond oil..... Oj.

M. Shake well. Sig. Inject half ounce to one ounce after washing the sigmoid.

From this time on her improvement was rapid. With the improvement in her bowels her backache disappeared, her appetite was better, and she ate with a relish, no discomfort following. The treatments were given now once in four days, later once in a week, and at the end of five weeks she had entirely recovered.

After a stay at the seashore she has returned in perfect health.

The points of chief interest in this case are the backache, the reflex cough, the irregular action of the bowels, the character of the stools, and the rapid improvement under local and tonic treatment as outlined.

111 West Kentucky Street.

COMPOUND EXTERNAL PILE: A CASE.

BY W. O. GREEN, M. D.,

Fellow British Gynecological Society; Member of Societé Francaise d'Electrotherapié, Paris; Chief of Clinic for Diseases of the Rectum, Kentucky School of Medicine; Associate Editor of the New Albany Medical Journal; Member Consulting Staff of Louisville City Hospital, etc.

LOUISVILLE, KY.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Mr. X., aged twenty-six, consulted me for a painful anal trouble. He is a large, well-developed, full-blooded gentleman, with a vigorous constitution and a rather phlegmatic temperament. On his paternal side there is a history of phthisis, while in the immediate family, which consists of five, four members to my knowledge have been the subjects of rectal disease. Three of these have been under my care for these ailments. He is scrupulously abstemious from the use of tobacco and alcohol, and very careful with his diet. He always relishes his food and never suffers with digestive disturbances. He does not give a history of any serious illness that would predispose to rectal disease, and his general health at present is most excellent.

He states that about two years ago he suffered from a thrombotic pile, which was incised by his physician. After two or three days of active treatment the disease disappeared. There was, however, a slight coincident prolapse of mucous membrane. With the cure of the pile this became smaller, but did not entirely disappear. Continually since he has noticed that with each evacuation of the bowel the prolapse would come outside the anus, but could always be returned and gave him no further annoyance. This has directed his attention to the especial care of these parts, and in consequence he tells me the function of the bowel has been perfectly normal ever since.

Several weeks ago he took a trip east and was compelled to lead a rather sedentary life for about two weeks. During this time the bowel became rather torpid, and once or twice blood was passed with the action, with no further annoyance, except of course the slight prolapse. After his return home and with the resumption of his active life the bowel again became normal and he saw no more blood.

Two days before consultation he suddenly felt a sense of weight about the rectum and a fullness at the verge of the anus. This appeared about two hours after the morning evacuation, and, so far as he could perceive, without any apparent cause. Examining the parts he could detect a small swelling at the anal margin. Through the day the swelling grew larger and the sense of fullness gave way to itching. The next morning the tumor had grown large and itched more violently. Two or three hours later, after being on his feet for an hour, pain came on gradually and grew more intense through the day.

During the succeeding night his sleep was much disturbed, and by morning (the day of consultation), he began to suffer very much. When I saw him the pain had become so intense that he felt unable to attend to his duties. It was located at the anal orifice and was of a burning nature. Sitting, riding, walking, or in fact any movement, increased its intensity. The evacuation of the bowel had caused intense suffering, and at that time he was unable to become comfortable while lying down and remaining perfectly still.

The protrusion had grown larger, harder, and more tender, and the pressure of the nates against it had aided greatly in aggravating the pain. The bowel had been acting regularly twice a day without the aid of laxatives. The fecal mass was always passed without straining, and was quite normal in appearance and consistency.

Examination showed the skin in the neighborhood of the anus to be slightly red, but not tender. The nates are quite close together, so that when in their normal position the anal region is strongly pressed upon and can be seen only by separating the parts with considerable force.

Just to the side of the anal orifice and partially covered with mucous membrane is a hard tumor about the size of a hazel nut. The surface is glistening, tense, and exquisitely tender. Where the mucous membrane covers the swelling the surface presents a deep purple color, the other portion being rather reddish. On pressure the contents of the tumor fails to be forced out, while the manipulation gives considerably more pain.

The external sphincter does not appear unduly contracted, nor does the mucous membrane of the anus reveal a hyper-

sensitive state, except at a point on the same side and immediately above the external swelling. At this point a linear induration is felt which is in the submucous tissue and extends perhaps one fourth of an inch directly up the anus; this, it may be said, is a thrombus. The mucous membrane of the anus is studded with polypoid growths which will average the size of a grain of wheat. Internal sphincter and the structures higher up are quite normal.

Diagnosis. Compound external pile.

Treatment. On account of the close coaptation of the buttocks some difficulty was encountered in bringing the tumor clearly into view. Packing a small piece of cotton in the anal orifice, an incision was made by carrying a sharp-pointed bistoury from the base on the outside through the base on the inside in the direction of the longitudinal anal folds (the cotton in the anus protecting the opposite side from the point of the bistoury). The knife was then brought out through the entire depth of the pile, and a large clot of blood turned out. Considerable bleeding followed, and the relief experienced was almost instantaneous though not complete. A small piece of iodoform gauze was laid between the cut edges of the wound and a large pad of absorbent cotton above, which was held in place by the pressures from the nates. He was directed to go home, lie down, and keep cold constantly applied to the parts. The incision was made about ten o'clock in the morning.

At seven o'clock the same evening I was called by telephone and found him suffering quite as much as before. There had been considerable bleeding, the small piece of gauze had disappeared, and the incision was partially closed. Underneath the united portion of the incision a purplish swelling could be plainly seen. Injecting a few drops of a four-per-cent. solution of cocain, a crucial incision was made and a second clot, quite as large as the first, was evacuated. The incision was supplemented by a slight trimming away of the superfluous tissue. He experienced relief, but as before a burning pain continued.

Patient was seen next morning, and in spite of the hot application felt very sore, while his sleep had been much disturbed through the night. There were no more thrombi, but the pile had become quite as large as before from edema. An ointment

of opium and belladonna was prescribed, to be thickly smeared over the parts, and the hot applications continued. In the afternoon he felt more comfortable, but the pile did not diminish in size. Treatment continued.

Third morning, the patient could see but little change from the night before. A lotion of lead-water and laudanum was substituted for the ointment. This was to be constantly applied and the heat continued or discontinued according to the comfort experienced. In the evening the pile had diminished to almost half the original size and he felt very little discomfort.

On the morning of the fourth day he felt quite free from trouble, except for a slight soreness following the movement of the bowel. The swelling had grown very small and he could resume his duties with little inconvenience.

On the fifth day parts have healed quite nicely. Little signs of the disease are left, and he passed out from my care cured.

REPORT OF A FEW RARE CASES OF FISTULA IN ANO.

BY JOSEPH B. BACON, M. D.,
Professor of Rectal Diseases in the Post-Graduate Medical School and Hospital.
CHICAGO, ILL.

[Written for MATHEWS' MEDICAL QUARTERLY.]

CASE 1. Mr. C. entered the Post-Graduate Hospital, February, 1895, and was operated upon before the class. He gave a history of having first had an abscess of the right ischio-rectal fossa about nine years ago, that was lanced and for a time apparently cured, but subsequently returned, and the abscess extended forward into the perineum. This abscess was again drained from an incision into the ischio-rectal space, and the opening remained as a fistula until he entered the hospital for the present operation. He can not give definite history, more than to state that during these several years he had numerous abscesses about the anus over both ischio-rectal fossæ.

The condition of patient when he presented himself to my clinic was of a very much emaciated subject, as he had recently been operated upon for an acute abscess in the left ischio-rectal

fossa, and had been in bed for several weeks in another hospital. After complete anesthesia the following condition was found. The right ischial region contained a fistulous opening leading into a tract that extended forward into the perineum, another into the rectum. Over the left ischio-rectal fossa was found a large fistulous sinus showing that a recent incision had been made into the fossa. From this fistula a tract extended forward into the perineum, and another posteriorly and back behind the rectum, where there was found an internal opening on the posterior wall of the anal canal between the internal and external sphincter muscles, thus forming a complete fistulous tract extending entirely around the anal canal, with one opening into the anal canal, and one external over each ischio-rectal fossa.

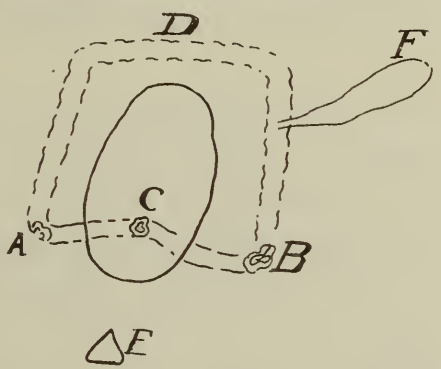


FIG. 1.—Illustrating the opening of fistula: (*a*) right ischio-rectal fossa and external opening; (*b*) left ischio-rectal fossa and external fistulous opening; (*c*) inner opening of the fistula into the anal canal; (*d*) fistula extending through perineum; (*e*) tip of the coccyx; (*f*) a secondary blind fistula running up under the left ramus of the pubes.

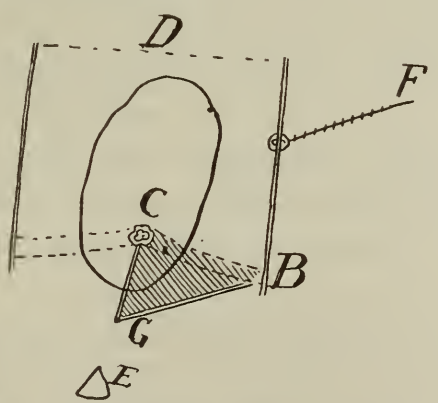


FIG. 2.—Showing the line of incision.

Tract from *a* to the perineum was laid open.

Tract represented by the dotted lines was curetted from each end and cauterized with a Paquelin.

Tract from *b* to the perineum was laid open where the secondary fistula leading to *f* was found, and curetted and cauterized.

From the internal opening *c* an incision was made in the posterior median line to *g*, a point half-way to the coccyx through the sphincter.

Another incision was made from *g* to *b*, and the flap containing the external sphincter *c g b* turned up by dissecting it up to the fistula *c b*, and thus enabling me to lay the tract open and curette and cauterize it together with the inner opening *c*.

The tract *a c* was cauterized and curetted from each end and left to granulate up, with free drainage established by the other incisions. A strip of iodoform gauze was drawn through the perineal fistula and renewed daily for the first week, when it was allowed to close. The other wounds were packed with iodoform gauze daily, and the wound irrigated with a two-per-cent. solution of creosote.

The fistulas were tubercular, and yet there was no general infection to be detected. Patient gained flesh rapidly after the operation, and left the hospital at the end of the second month with the wound thoroughly healed, except the pocket leading up under the ramus of the pubes. He returned regularly to the clinic for a few weeks until the whole wound was healed. There was perfect continence.

This case is especially of interest in many ways.

1. The extent of the fistulous tract.

2. Fistula rarely extends through the perineum when the abscess begins in the ischio-rectal fossa.

3. Had I followed the usual method of laying the fistulous tract open throughout the whole length, and thus severed the perineal attachment of the sphincters, their power would have been weakened and possibly resulting in incontinence.

4. Had I followed the usual method of laying bare the tracts *a c* and *c b* there would have been a quadrant of the sphincter cut away and incontinence certainly to result.

5. The method of making a flap and dissecting up the sphincter to the fistulous tract, so far as I know, is original.

Case 2. Mr. L., aged twenty-two, was operated upon before the class at the Post-Graduate Hospital, January, 1895, for fistula in ano, when the following conditions were found: A hard, fibrin-

ous ring could be traced, beginning at the right ischio-rectal fossa, and running forward through the perineum and back into the left ischial space.

After gentle divulsion of the sphincters an inner opening was found on the posterior border of the anal canal leading to a tract that extended into the right ischio-rectal fossa.

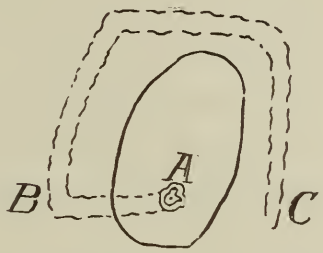


FIG. 3.—Showing extent of the fistula: (*a*) inner opening; (*b*) right ischio-rectal; (*c*) left ischio-rectal fossa.

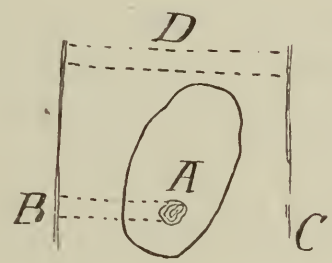


FIG. 4.—Showing lines of incision: (*d*) perineal fistula; (*b a*) anal fistula.

In order to avoid any danger of incontinence I determined not to cut the sphincters, but to lay bare the tracts on each side of the anus, and leave the fistula across the perineum and the one leading from the fossa to the anal canal to heal after curetting and cauterizing with a Paquelin, as they would have free drainage from the lateral incisions.

A strip of iodoform gauze was drawn through the perineal fistula daily for the first week. The lateral incisions were loosely packed with iodoform gauze and daily irrigated with sublimated solution 1 to 2,000.

Patient gained rapidly, and the fistulous tracts were rapidly closing up at the end of ten days, when he determined to leave the hospital, and promised to visit the clinics, but was lost sight of, as he never returned. This case was interesting from the fact of the fistula running across the perineum.

I have no doubt but he has entirely recovered, and know if he had attended to his part of the contract he would have, as subsequent cases where by free external drainage the internal fistula has healed after being cauterized and curetted, when the sphincter muscles were left intact, except moderate divulsion at the time of operation.

Case 3. Mr. K., operated upon before the post-graduate class at Chicago Charity Hospital, June, 1895. Nine months previously patient had a right ischio-rectal abscess resulting in a complete fistula; outer opening over the right rectal fossa; inner opening on right lateral side of the rectum above the internal sphincter about two inches above the anus.

During the acute stage his family physician laid the fistulous tract open, cutting both sphincters, and the patient had fecal incontinence for several months; but finally the sphincters regained their action, yet the fistula remained.

When I operated there was a complete fistula of very large caliber, especially the inner opening, which would readily admit my finger. Leading off from the center of this tract was an offshoot extending around to the posterior side of the rectum and up between the rectum and sacrum about five inches.

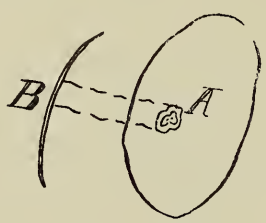


Fig. 5.—Showing fistula and line of incision into the ischio-rectal fossa: (*a*) inner opening of the fistula; (*b*) line of incision.

With the previous history of fecal incontinence, and the fact that the sphincter muscles had been cut on the same side at a former operation, I decided to leave the muscles intact, and to make a free incision around the side of the anus beyond the border of the external sphincter, and thus get at the fistula from behind and lay it open up into the rectum, after which I curetted the tract and the inner opening and cauterized them thoroughly by means of the Paquelin.

This same incision gave free access to the deep pocket above and behind the rectum. The wound was packed with iodoform

gauze and daily irrigated with a two-per-cent. solution of creosote and repacked again.

The drainage was so thorough that the inner opening began at once to contract and fill up with granulations, and after three weeks there was no escape of gas or feces through it, and now, eight weeks after the operation, the internal fistula is perfectly closed, and the external wound with the pocket above has filled up within two and a half inches of the skin, which practically means a success, as it is now a simple open wound.

Much of the success of this case is due to the faithful work of the house surgeon, Dr. Heisz, who daily attended to the wound.

The last two cases convince me that we may cure many cases of complete fistula in ano without cutting the sphincter muscles, by giving free external drainage and keeping free drainage until the inner opening has closed. There is a small per cent. of cases where the tract is so limited that we may dissect it out and unite the wound primarily with sutures, but such cases are not the rule, and the results of suturing tubercular wounds about the anus are rarely satisfactory.

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. II. LOUISVILLE, OCTOBER, 1895. No. 4.

JOSEPH M. MATHEWS, M. D., - - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

DANGERS INCREASE WITH UPLIGHT SKYWARD.

Dangers increase as we go upward. The mixer of mortar is not in as great danger as the hod-carrier as he climbs the ladder with his load of mortar or bricks. To ascend the dizzy heights safely there must be strong hands, clear eyes, and a steady head. We may walk safely on level ground, but on a precipice a single misstep or stumble may dash us into pieces on the rocks beneath. Our horizon widens as we ascend, likewise our responsibilities increase. More is expected and required of the engineer than the brakeman, of the pilot than the stoker, and justly so; in truth this principle is so universally acknowledged as founded on common sense that we never stop to argue it but accept it as a fact, undeniable and indisputable. "Of him that hath much, will much be required." This rule applies in medicine and surgery.

What wonderful advances have been made in the last score of years! What tyro in medicine, what commencement orator has not declaimed eloquently of these wonderful advances! Do we always realize that these advances have laid a heavy responsibility on our shoulders? What profit to speak eloquently of asepsis and the wonderful operations of various surgeons if we fail to catch the lesson for each of us. Average medical skill now means a considerable advance over what it was even ten years

ago. The very lowest legal requirement is "average medical skill." Certainly he is an unworthy workman who is content to be placed always on the lowest level. It will profit us nothing to know or speak of Billroth, Lister, Gross or Sims if we fail to improve our opportunities and profit by their examples. Compare the advantages the medical student of to-day has with those of ten years ago. Every reputable medical school in the country requires three graded courses of six months (most schools require four years).

The two leading questions in medical education are, practical instruction in classes in properly equipped laboratories, and abundant clinical material and bedside instruction. The medical school that does not magnify this method of instruction will sink into well-deserved obscurity. There is no excuse for any graduate to say, as nearly all of his predecessors were forced to do, that he has no practical knowledge of the microscope, stethoscope, laryngoscope, or that he has not had ample opportunities for witnessing all the important operation in surgery according to modern methods and has personally examined and prescribed for patients in the clinics and at the bedside. The profession has taken the lead and the community will speedily follow and require more knowledge and higher skill of students having such advantages. The old didactic methods with an operation at long intervals has passed away never to return. There are many bright lights in medicine and surgery who have forged to the front despite the heavy handicap of defective education and training, many great specialists who have become such after years of hard and toilsome work as general practitioners. Now we can justly expect as the result of better methods of teaching a body of trained clinical observers, men who have become versed in all the methods of pathology and have applied these methods in the clinics and hospitals, doctors who are really expert before they receive their diplomas.

It is to be hoped the day has passed when a diagnosis of malaria, hysteria, neuralgia, or rheumatism will serve to cloak the ignorance of the doctor or satisfy the laity. Why treat the

patient with phthisis for malaria when a simple examination of the sputum would settle the diagnosis. Why guess malaria when a drop of blood examined under the microscope will quickly decide the matter.

Having eyes, let us see; ears, let us hear; hands, let us keep them clean and use them skillfully. We look only for good to result from lengthening the medical curriculum. Fewer students but of better quality, and when graduating well trained, well equipped for good work. It behooves those of us already in the profession to discern the signs of the times, to buckle on our armor, to improve our opportunities if we would not lag superfluous on the stage.

CARE OF PERSONS FOUND UNCONSCIOUS ON THE STREETS.

A committee from the Medical Society of the County of Kings, New York, composed of Drs. J. H. Raymond, John C. Shaw, and Lewis D. Mason, has done most commendable work in formulating a set of recommendations, setting forth the crying need of providing means for caring for those found unconscious on the streets, and the manner of ministering to them. It is a sad fact, as instanced so often by our daily papers, that patients are taken to the police stations as drunk when found on the streets unconscious instead of to the hospital where proper treatment can be had. Too often the bright, newly-appointed ambulance surgeon, filled with the importance of his position, will diagnose a case as a "drunk," because perphaps some one of the bystanders who knows has ventured a suggestion as to the cause of the unconsciousness, which, if followed, would make him appear as being dictated to. The following are the recommendations of the committee:

1. Whenever a person is found in an unconscious or semi-conscious state on the street, or elsewhere, away from his own home, the police, when notified of such case, shall immediately summon medical aid, sending for the ambulance surgeon or police

surgeon, or in towns where there are no such officers then for the nearest physician, who should be compensated for his services by the authorities.

2. The police shall not decide as to the disposition of such a case, but must await the decision of the ambulance surgeon, police surgeon, or of the physician called, and must act in accordance with such decision.

3. A police officer who acts in opposition to such decision should be, by the ambulance surgeon, police surgeon, or the physician, reported to the police commissioner, who should subject such officer to discipline, rules governing such cases having previously been made and promulgated.

4. Ambulance surgeons should give prompt and immediate aid to patients found in the condition hitherto described, and remove them to the nearest hospital, or to their homes when ascertainable, according as their judgment dictates is the best course to pursue in the interest of the patients. The existence of an alcoholic complication in the case should in no wise adversely influence the surgeon or physician called as to the disposition of the case, as such a complication often renders skillful medical treatment the more imperative.

5. Ambulance surgeons and other medical men brought in contact with cases in which alcoholism is a frequent complication, should be reminded that this condition often renders an immediate diagnosis impossible in the most serious and oftentimes fatal forms of cerebral disease and injury, as well as in other diseased conditions.

6. The examination of ambulance surgeons should include the differential diagnosis of alcoholic coma from other form of coma, and the various diseases or injuries that may produce a condition simulating alcoholic intoxication.

7. Hospital authorities receiving financial aid from the city should not refuse admittance to patients suffering from supposed alcoholism, for in so doing they are liable to be contributory to the death of such patients. They should know that if the condition be one of uncomplicated alcoholism, this fact will in a short time be revealed, and other disposition may be subsequently made of the case; while, if the patient is so affected as to need immediate and skillful treatment, his rejection by the hospital authorities may conduce to a fatal result. If they refuse to receive such cases, because complicated with alcoholism, they should be held legally responsible for the results. And, further, if such refusal is persistent after their attention has been called to the matter, the city authorities should strike the name of such hospital from its list of beneficiaries.

8. The municipal authorities should also consider the question of the establishment of a special emergency hospital or hospitals

conveniently located with reference to the various districts of the city; or a system similar to that of the Bureau d'Admission in Paris, connected with which there is a special hospital for all cases of alcoholism or cases complicated with alcoholism that may occur in the streets of that city. Or, the authorities might consider the establishment of a special department in connection with the hospitals of the city similar to the "Alcoholic Wards" of Bellevue Hospital, New York, where more than, 4,000 alcoholics are annually treated. Such a plan would relieve the general hospitals of the burden of such cases, or compel them to make special provision for their care. Should the existing methods prove inadequate, the Committee recommends some such plan as is here outlined.

SIGMOID FLEXURE DISEASE.

It is with pleasure that we present our readers two practical articles upon diseases of the sigmoid flexure in this issue.

It is a peculiar state of affairs that there has been such a paucity of literature bearing upon this subject when its importance can not be gainsaid.

Until the appearance of Mathews' work upon "Diseases of the Rectum, Anus, and Sigmoid Flexure" attention had never been directly called to the pathological changes occurring in the sigmoid and the local treatment, except by the same author in shorter journal articles.

Prompt and vigorous treatment after a careful diagnosis will relieve many of the cases of "chronic dysentery," so-called by the older writers.

THE INDEX MEDICUS.

The importance of the Index Medicus to the profession of America can not be overestimated, and the efforts of Drs. Robert Fletcher and J. S. Billings to re-establish the work under the auspicies of the Surgeon-General's Library, can not be too warmly commended. No copies will be printed for sale, no advertisements included, and no exchange list requested.

The following agreement further expresses the plan adopted, and it is earnestly requested that there be more liberal response to the call from physicians in the West:

. . . . . 1895.

The undersigned hereby agrees to subscribe for one copy of the Index Medicus for . . . . . year . . at $25 per year, subject to the following conditions, viz., When two hundred subscriptions have been received by the editors the publication is to commence, and on notification of this I will send $25 to them. If, by December 1, 1895, the two hundred subscriptions have not been obtained, the attempt to revive the publication will be abandoned. Address, ...

Address of Editors: Dr. J. S. Billings, Dr. Robert Fletcher, Library of the Surgeon-General's Office, Washington, D. C.

EDWARD RUSH PALMER, M. D.

The whole city of Louisville was thrown into consternation on the evening of July 5th upon hearing of the sudden death of Dr. Edward R. Palmer. This sadness was intensified when it was ascertained that he had died by accident. So full of life was he, so vigorous, so enthusiastic, that it scarcely seemed possible that he had passed out of existence. No man in the city of Louisville could have been so greatly missed as Dr. Palmer. He was known by every one, and was like a ray of sunshine in the daily life of this city. He lived a gentleman, and died without an enemy. He had the manner of a Chesterfield, the urbanity of a Frenchman, and the heart and instincts of an American. Dr. Palmer came of good old Vermont stock. He was born at Woodstock, Vermont, November 18, 1842. His father, Dr. Benjamin R. Palmer, came to Louisville in 1848, and taught anatomy in the Medical Department of the University. Dr. Palmer entered this same school in 1862, and graduated in 1864. At this time he entered the army as assistant surgeon. At the close of the war he located in Louisville in the practice of his profession. Although but a youth, and looking young for his age, his success was immediate. In 1868 he was called to the Chair of Physiology in the Medical Department of the University of

Louisville. As a lecturer he was unsurpassed. A finished orator, as handsome as an Apollo, with a ready flow of wit, it was no wonder that he captivated at once all students who had the pleasure of listening to him. In 1893 he was elected President of the American Association of Genito-Urinary Surgeons. He was the founder and the President of the Surgical Society of Louisville. He was also a member of the other local societies and of the Kentucky State Medical Society. It was very natural, possessing such attributes as were his, that he would at times fall into politics. He was for many years a member of the School Board, and had also served upon the Board of Aldermen. Had he been a politician instead of a doctor he could easily have been elected to Congress at any time, and no doubt to the Senate. Dr. Palmer leaves a wife, one daughter, and two sons. It goes without the saying that the medical profession of Kentucky is much interested in the success of the latter, Edward R. and J. B. Palmer. No man who has ever died in Louisville had such an attendance at his funeral. And they were true mourners indeed, for many hearts felt his loss. The colored people as well as the white joined in the procession, and the children as well as the grown people shed tears over his grave. Poor Palmer! Peace to his ashes.

Our frontispiece in this issue is a reproduction of the latest likeness of our departed friend which he had taken.

A Word to the Busy Doctor.

A SURGEON should, like the engineer, be looking out for the dangers ahead. An engine may be run for many months without accident but at last meet with a wreck. A surgeon may operate many times and then be confronted with a serious danger. So often we see tabulated tables showing a great number of successful laparotomies, lithotomies, etc., but the full details of an unsuccessful surgical case is of more importance to the painstaking operator than the whole list of successful cases. It is how to avoid the breakers that we are most interested in.

WITH these remarks as a preface, I desire to mention some dangers that may occur in your practice as a rectal surgeon. First in the list I desire to call your attention to operations done for that most common of all rectal diseases, and deemed by some the most trivial, viz., *hemorrhoids*. It is thought by some, or more properly speaking, I should say, *has* been thought (for the plan is almost obsolete with good surgeons) that injecting piles was the simplest method of treating them.

Among the dangers of such a plan of treatment can be mentioned and substantiated the following: Embolism, fatal hemorrhage, sloughing into healthy tissue, peritonitis, etc., either one of which could end in death.

If the ligature is the plan selected, it in my opinion is the safest and best of all, and yet if clumsily done may be attended with danger. If the ligature is too loosely applied and the tumor cut off, the ligature may slip off and a fatal hemorrhage ensue. If the cut is made in the tissues around the pile and the vessels not properly secured, hemorrhage may also take place. The eminent Gross lost a patient in this city by hemorrhage after an operation for piles.

NO OPERATOR should be guilty of doing the most insignificant operation without guarding against all danger from sepsis. A

number of authors have reported cases of tetanus and death following in operation for piles. These of course were due to the introduction of the germ of tetanus. Therefore before doing any operation upon the rectum every possible care should be taken looking to the protection against infection.

Above most portions of the body the neighborhood of the rectum is particularly disposed to a rapid absorption of septic material. The blood supply is enormous, the peritoneum in close contiguity, and the lymphatics abundant. It is a rich field for destructive germs to work in. Let me entreat you to have that field, and all things that pertain to an operation, in a sterilized condition.

Fistula in Ano. The danger in operating for fistula in ano is not so great from hemorrhage as in operating for piles. The field is clear and all vessels can be more easily secured. Then pressure can be more evenly applied. But a most formidable danger confronts us in the improper division of the sphincter muscle, resulting in incontinence of feces. Should this occur after an operation the patient will never cease in calling down curses upon your head. Whatever may be your eagerness for a quick recovery of your fistulous patient, never divide the sphincter muscle but once at the same sitting. I am more and more convinced that the fault is that we cut too little than too much in operating for fistula, yet the injunction should never lead us to cut this important muscle too much.

Then again, a surgeon may think that a fistulous tract that runs up the mucous membrane for several inches is of small importance and easily divided. Let me warn you against such a procedure. It is accompanied by a great risk of hemorrhage and of such nature as would be difficult to control. Whenever such an operation is deemed necessary, be prepared to *plug* the rectum just so soon as the cut is made, and don't wait to see whether hemorrhage will result or not. I would never leave the patient before this precaution was taken.

In rectal, as in all other surgery, the minor details are the most important. In a subsequent issue I will deal in some dangers to be feared in other operations upon the rectum.

With Our Exchanges.

DISEASES OF THE RECTUM.

PAUL, F. T., LIVERPOOL: EXCISION OF THE RECTUM. (*British Medical Journal.*)

Perhaps one of the best recent advances in the operative treatment of malignant diseases is the gradual replacement in cancer of the elementary canal of operations affording only temporary alleviation by those which have for their aim not simply the relief but the cure of the patient.

Excision of the rectum, except in the minor degree, has not been warmly advocated by surgical writers in this country. Even the pioneer, Harrison Cripps, out of an experience of 400 cases of cancer of the rectum coming under his notice, has only actually operated in 38 (1892), and does not appear to approve of the major operation. Treves does not even mention the name of Kraske or Alexander in connection with the subject. He states that the term proctectomy is misleading, "as the rectum is never excised, but only a comparatively small part of it." He mentions three inches as the usual limit, and considers that "in no case should the peritoneum be deliberately opened." Jacobson only mentions the high operation to condemn it, but American and Continental surgeons regard it with much more favor. The writer's experience, very much more limited than that of Mr. Cripps, is that the most extensive operations upon the rectum for cancer are in every way more hopeful than those performed for much less advanced disease in the mouth, and which almost all surgeons would consider it a duty to undertake.

In the same way that cancer of the tongue requires different procedure for its removal, in accordance with the situation and extent of the disease, so proctectomy varies considerably, and a different operation will be called for in each of the four following classes of cases:

1. Carcinoma of the lower end of the bowel within easy reach of the finger.

2. Growths which have commenced high up, but are or have come down to be within reach of the finger.

3. Extensive growths commencing low down, but the limits of which can not be defined.

4. Growths too high to be recognized without laparotomy.

In five cases the lower part of the rectum was removed by the operation advocated by Mr. Cripps. First an incision is carried from the anus to the tip of the coccyx, splitting the rectum in the middle line posteriorly. If the disease is placed quite low down, incisions are next made round the anus, which is removed with the growth, otherwise it should be left. When the above incisions are completed the lower part of the bowel is freed on all sides with scissors well beyond the limits of the growth, great care being taken of the urethra. During this stage hemorrhage is free, and is, I think, best dealt with by operating rapidly while an assistant does what he can with sponge compression. Finally the bowel is divided. This was formerly effected with an *écraseur*, the wound being left to granulate.

The second class of cases may sometimes be very satisfactorily treated by operation. The method adopted has been to remove the coccyx, and if necessary a part of the sacrum, then excise the growth through an incision in the posterior wall of the rectum.

The cases included in Class 3 are much more hopeful than would be supposed. Such patients, unless they elect to remain as they are, must choose between colotomy and the high operation. I unhesitatingly recommend the latter whenever possible, even although it may be doubtful if the entire growth can be eradicated. What we have to look to are the comfort and subsequent duration of the life of the patient. Can these be improved without undue risk? From what I have seen of death from cancer of the rectum, I believe it to be incomparably more distressing than death from internal extension or recurrence of the growth, so that if the local disease can be removed it is at least a gain to the patient's comfort while he lives. Colotomy affords less relief than excision, and for a much shorter period. Moreover the patient always prefers the artificial anus to be somewhere near the site of the natural orifice, and with the help of a new truss, to be described further on, I have found it easier to retain the feces or a prolapse after excision than after colotomy. The mor-

tality of Kraske's operation must of course be higher than for such a simple proceeding as inguinal colotomy, but it really seems to be much less than one would suppose from its apparent severity.

The mode of operating is to place the patient on the left side with the knees up. Then make the first incision from the anus backward to the middle of the sacrum, rapidly clear the soft tissues from the sides of the coccyx and lower half of the sacrum, divide the latter with saw and forceps, and tear the bones away with lion forceps and a few touches of knife or scissors. The bleeding is free, and should be at once stopped with compression forceps or sponges. Next the lower end of the rectum is detached with knife and scissors. First one side is cleared and plugged with sponges, then the other, care of course being employed in detaching the bowel from the neighborhood of the urethra and back of the bladder; from the hollow of the sacrum it shells out with the greatest ease. At this stage the bowel hangs loose, and it is convenient now to ligature the vessels which have been plugged with sponges. This having been accomplished, the higher part of the rectum is liberated by opening the peritoneal cavity, and dividing as much of the meso-rectum as is necessary. In the latter there are very large vessels which should be clamped or tied before being cut. When plenty of bowel has been drawn down, the rent in the peritoneum may be loosely closed with a few fine sutures, and a large glass intestinal drainage-tube plugged with wool is inserted into the bowel and ligatured above the growth. If the intestine is loaded with feces the tube had better be introduced below the stricture and forced up—to the detriment of the specimen—as it is very difficult to avoid some escape of feces when this powerful bowel is opened under high pressure. The tube having been fastened in, the diseased part is cut off and the stump sutured to the top corner of the wound, the higher the better, as less gut needs to be drawn down, and the orifice is in a more favorable position for the truss. There is no tension on the sutures in this operation. The remainder of the large wound can not be closed, or only in part; it is therefore filled with antiseptic dressings through which the tube from the bowel projects. When there is much pressure of feces, they are caught in a basin for the first few hours, and subsequently in a

waterproof bag containing antiseptic wool; but when there is no such connection the bag only is used. The advantages of the tube are that it keeps the wound aseptic for a few days and enables all the large vessels in the rectal walls to be closed with a single ligature, while the advantage in discarding it would be that one could fashion a smaller and better artificial anus. The former considerations have seemed to me to outweigh the latter. The tube generally sloughs out on the fourth day, and the wound takes about eight weeks to heal. Subsequently a special rectal truss is required to prevent prolapse and incontinence of feces. A small plastic operation will considerably improve the anus; but when a good deal of bone has been removed some more rigid support than skin is necessary for comfort.

The chief danger of this operation is shock. It is the only one I have met with so far, and is almost entirely due to hemorrhage. The patients are generally rather old, and they are already reduced by the disease. If the operator stopped to ligature every vessel as it was cut, the length of time employed would prove an equally fruitful source of shock. Expedition is necessary, and I think the best success is attained by bold and rapid operating, while the ready fingers of an assistant compress the vessels with sponges as they are cut.

The fourth class, in which the tumor can only be discovered on opening the abdomen, is not represented in my cases. Supposing such a growth to be suitable for removal, I should deal with it by one of two methods, according to the condition of the patient and the accumulation of feces above the stricture. The safer operation, suitable for those patients in which the symptoms of obstruction are pronounced, would be to doubly ligature and divide the bowel above the growth, taking the upper end out through a small separate wound in the inguinal region, where subsequently a tube could be inserted and an artificial anus established. Then excise the diseased portion of the rectum and invaginate and close the lower end. If the patient were in better condition, and there were no great accumulation of feces, I should simply excise the growth and approximate the cut ends with Murphy's large-sized metal button. This ought to be a favorable position in which to use it.

Mortality. The number of deaths from the operation in these

fourteen cases was two, or equal to 14 per cent. Both occurred in somewhat unfavorable subjects operated upon by Kraske's method. If cases were selected the death-rate would be greatly reduced. Mr. Cripps records a death-rate of between 7 and 8 per cent., his cases including none operated on by Kraske's method, but from reasons which may be gathered above I have declined operating in none but absolutely hopeless cases. The simpler ones all recovered.

Duration of Life. Of the twelve patients who recovered from the operation six have since died from recurrence of the growth, the period of death varying from ten months to two and a half years, and giving an average of exactly one year and eight months. Of the six still living, the time elapsed since the operation ranges between ten or more years and one year and a quarter, giving an average duration of between three and a half and four years. The absence of exactitude is due to the fact that the earliest case left for work in America four years ago; hence, if still living, it would be fourteen years since his operation. Most of the hospital cases who present themselves for treatment with cancer of the rectum have had symptoms of its presence for from nine months to a year, and sometimes longer. Now what is their expectation of life? This is a question I am not prepared to answer definitely, but so far as I can gather from experience in my own practice and that of my friends, and from the results of colotomy, it would appear that the average expectation of life in those who are sufficiently bad to apply for relief can not exceed a year even when colotomy is performed. Now my cases of excision taken as they stand, including the whole fourteen with two deaths, show an average period of life of upward of two and a quarter years since the operation, which is probably more than double their expectation under any other treatment; and this without counting the fact that six patients, including some of the most hopeful, have a prospect of living for some years to come, and thus adding considerably to the success of these statistics. During their survival all my patients have returned to work, with the exception of two ladies, who had no work to do, so that the result of the operation has been not only a gain in life, but a gain in usefulness, and also a gain in comfort.

Other Results. One patient only suffered from stricture consequent upon the operation, Case 2. In the earlier slight cases I followed Harrison Cripps in not stitching the bowel to the skin. Under these circumstances the funnel-shaped wound cicatrizes, and is liable to contract and form a stricture. Case 1 could retain feces except when attacked with diarrhea. Cases 3, 5, 7, 9, and 13 suffered from more or less prolapse of the bowel and mucous discharge. In Case 6 I excised the prolapse with very little benefit, as it soon returned. In Case 9, a slight case, I narrowed the opening, and he subsequently had very good control over the bowels. Case 4 had a preliminary colotomy done, so of course was not troubled with his rectum. In Cases 10 and 12 the upper and lower parts of the bowel were approximated, and the normal characters of the rectum restored. It is only in the more severe operations where the cut end of the bowel is stitched to the skin that a bad prolapse takes place. This is due to the absence of the support natural to the parts by a loss of a portion of the sacrum, the coccyx, and the levator ani and sphincter muscles. Complete excision of the prolapse does not

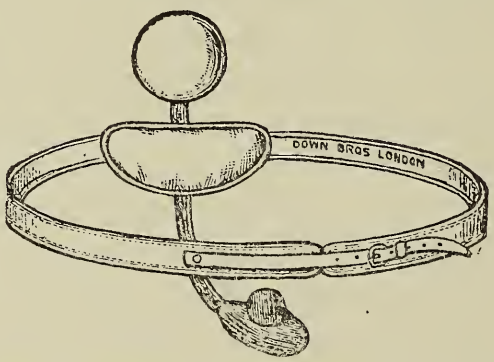


FIG. 1.—New rectal truss designed by the author for use after excision.

touch the cause, and therefore does not cure it. I felt this prolapse and constant mucous discharge from it to be the weakest element in the results obtained by the operation, and therefore every effort was made by our instrument-maker to remedy it by means of rectal trusses, but without success. They not only would not retain feces when liquid, but often allowed the prolapse to escape beside the pad. As a matter of fact, no instrument tried maintained a constant pressure in the ordinary varying positions of the body. I therefore requested Mr. Reynolds, of

Liverpool, to make a rectal truss to my design, shown in Figure 1, which he satisfactorily accomplished.

We tried it first on Case 7, the worst, and he at once said it was the very thing he had been wanting for the past two years. Poor fellow, he had been steadily going on with his work, which involved constant walking about with a large prolapse, and now that he was made quite comfortable in this respect, he soon began to show signs of recurrence, from which death occurred six months later. The truss has since been used in Cases 5 and 13, and in both has proved very satisfactory. The special feature of the instrument is that counter-pressure is obtained by continuing the spring supporting the rectal pad above the waist belt to end in a circular pad in contact with the base of the spine. The rectal pad is made to a cast of the orifice, and is covered with india rubber. Messrs. Down Brothers, of St. Thomas's Street, S. E., have undertaken to manufacture the truss if required in London, and they suggest that the spring action may be improved by using a spiral spring in the upper pad, which I think very probable. Of course careful measurement and accurate fitting are essential, and it will be found that the higher the cut end of the rectum has been implanted the better the truss will answer, as the rectal pad will be more out of the way when sitting down. I think the same principle may be useful in other affections for which a rectal truss is required, and, as the spring carrying the pads may cross the waist belt at any angle, I do not see any difficulty in applying the principle in cases of colotomy. I must quite dissent from the view expressed by some German writers that a new sphincter is developed, or that the act of defecation can become normal again after the lower end of the rectum is excised. Solid motion gives no trouble; liquid always runs away. When the whole rectum is removed even solid motion is passed unconsciously. Hence the great value of Kraske's operation, with approximation, and the use of the truss in other cases.

Recurrence. As in all other cases of carcinoma, unless taken very early recurrence is the rule, and the exceptions are not numerous in cancer of the rectum. Case 1 was a genuine cure, having survived upward of ten years. I think Case 9, and possibly 10 or 11, may also prove to be cures. Case 5 has passed the critical three years, but his was a very bad case to commence

with, and he has made some complaint of sciatic pains, which are certainly suspicious. But even if recurrence occurred in every case it would not influence the favorable view I entertain of excision as compared with colotomy or simpler palliative measures, so long as the mortality of the operation continues low. And should it tend to rise it may at any time be met by a more rigid selection of cases; of late I have accepted quite 75 per cent. Recurrence is most frequent in the liver and lumbar glands, where it causes gradual exhaustion with but little pain. It has also a somewhat marked tendency to occur in the pelvic cellular tissue, where it is liable to invade the sacral plexus, and give rise to a painful sciatica. Contrasted with cancer of the tongue the recurrence is much more favorable, as the latter is just as distressing and dangerous to life in the neck as it was at first in the mouth.

Age. Cancer of the rectum extends over a wide period of life. The respective ages of my patients were 47, 56, 37, 46, 41, 55, 56, 29, 59, 64, 42, 56, 64, 60. The youngest patients whose growths I have examined microscopically were 23 and 25, but I once saw, with Mr. Reginald Harrison, a boy of 14, who had a malignant tumor of the rectum possessing all the features of carcinoma. Colotomy was performed, but he died within six weeks with extensive secondary deposits in the liver.

Sex. Seventy-eight per cent. of the patients were males and 22 per cent. females. Roger Williams gives the liability of the sexes to rectal cancer as equal, but I have certainly seen many more cases in men than in women.

Davis, Will B., Pueblo, Col.: Internal Hemorrhoids and their Treatment. (*Denver Medical Times.*)

To the beginner the hypodermic treatment is catchy. It can be done without an assistant or an anesthetic. It disposes of the case for a time, pleases the patient, and adds to the income of the operator, whether the stronger solutions to the pure acid is used, which cause the piles to slough, or the five to fifteen per cent. solution at varying intervals, producing gradual atrophy of the tumors. If this ended the matter all would be well; but alas! in the majority of cases it does not end it altogether with the patient; for, sooner or later—it may be several years—most patients

treated by the hypodermic method begin again to be troubled with piles. This has been my observation, and I believe most all rectal surgeons have had the same experience. The reason for this is because all the pile tissue in such case was not destroyed. In a given case of piles it is almost if not quite impossible for any one to be sure of thorough work without divulsing the sphincter. This should not be attempted without anesthesia. The chief point which the hypodermic method ever had to commend it to the surgeon, and which led so many to try it, was that it could be applied without an anesthetic. To the patient it commended itself more on the ground that it could be done "without the use of the knife" and without detention from business, etc.

Any one who has ever attempted to destroy piles by using the stronger to the pure acid knows that as soon as injections are begun the piles begin to enlarge, the sphincter grows more tense, and, though treatment may be applied to all tumors which present, there may be and generally is pile tissue or small tumors above, which have not prolapsed, that become hidden from view. The swelling of the prolapsed tumors, in the grasp of the tense sphincter, so occludes further view of the rectum that no one can be sure or accurate. (In fact no satisfactory *view* can ever be had of the rectum without paralyzing the sphincter, even for diagnostic purposes, and experienced rectal surgeons use the speculum very little, and depend less upon its revelations (?) for diagnostic purposes.) Hence, when such tissue is left—and some is generally left—in time they grow, prolapse, are gripped by the unrelenting sphincter, and the patient is quite as miserable as before.

In the use of the five to fifteen per cent. solutions, and gradual atrophy is secured by treatments at varying intervals, after a time the same tumors again make their appearance. The injections cause a fibro-plastic deposit throughout the substance of the tumors which, becoming organized and undergoing the contraction characteristic of such new tissue, does produce atrophy of the pile tumors; but in the course of time this very material, whose contraction caused the atrophy, is itself absorbed, when the vascular tissue refills and grows until it reaches, or in some cases surpasses, in size its former self. And just here is a prac-

tical point I will mention, though it be somewhat a diversion. A pile tumor having been caused to atrophy by injections, and afterward returning to its former size and behavior, will not be so easy to cure (?) by the hypodermic treatment the second time. Frequently in such cases the hypodermic treatment applied the second time proves immediately unsatisfactory, whereas in the first treatments it may have responded well. I have stretched the sphincter under chloroform, and dissected so many of these piles, and ligated them several years after they had been treated by injections, that I can readily tell such a case from one which had never been injected. The tumors in such cases are more intimately attached to the muscular wall of the rectum. The line of junction is much harder to define. Their dissection is more tedious. They are firmer—they contain more fibrous tissue disposed to *a la trabeculae*, and when ligated and cut off they do not collapse to the same extent as one which has never been injected.

Certainly, as compared with other methods, the hypodermic treatment is the most unreliable as a permanent cure, which ought to be enough to banish it from the domain of surgery.

I have said before and yet maintain that the fear of an embolus is based more on theory than actual fact. As to carbolic poisoning, while it might be produced by its reckless use, such a result is scarcely to be apprehended in competent hands. Nor do I fear deep sloughs where the acid is intelligently used. All these former and first objections have nothing to do with prejudicing me against the hypodermic treatment, for none of them need ever occur, but it is because the hypodermic treatment does not cure—does not cure permanently—while other methods of treatment when properly applied do cure, and cure permanently.

Pratt's operation aims to remove the last inch and a half of the rectum entire, finishing by bringing the lower end of the gut down and stitching it to the muco-cutaneous margin. I believe this is also called the "American operation." I have before stated that I did not think this operation a justifiable procedure except in cases of extreme prolapsus, aud in such cases only. As an operation for the cure of piles, it should not be done. In our opinion there is about as much reason in removing the first half inch of the female urethra for caruncle as a part of the rectum

for piles, and about as much sense in removing the first three fourths or inch of the vagina of all females because, perchance, the vulvo-vaginal glands may become cystic, or inflame, or the vagina be the cause of getting its possessor into some future trouble, as it is to remove all rectums, as a preventive of future ills, or for the cure of all obscure or irrelevant maladies that may exist, which seems to be a fad with Pratt; for it is now almost reduced to a proverb, that "many are they who enter Lincoln Park Sanitarium, but few are the rectums that escape," whether there is any thing the matter with them or not.

HENDERSON, N. H., CHICAGO: A NEW OPERATION FOR THE RADICAL CURE OF HEMORRHOIDS. (*Journal of the American Medical Association.*)

A few years ago the surgeon who had before him a case of hemorrhoids found himself between the devil of ligation and the deep sea of the actual cautery. But in the great "onward march" of surgery this particular field has not been overlooked, and to the specialist there are few cases not amenable to some form of treatment.

When Dr. Whitehead gave to the profession the "Whitehead operation for the radical cure of piles" much was said for and against it. Then Dr. Pratt introduced the famous "American operation." Both are too familiar to require description, and both have much to recommend them, as well as much that invokes criticism. It would seem that in the simple operation of destroying a few hemorrhoids there would be little room for difference of technique, yet how often a slight change in the *modus operandi* will simplify and render easy a once-difficult problem, at the same time giving better results.

It is my purpose to describe an operation which, by virtue of its simplicity, is preferable to either the Whitehead or the American in cases where either of the latter are indicated.

The patient is prepared, as for any operation on the rectum, by giving liberal cathartics twenty-four hours previous, followed in twelve hours by a copious enema, light or perfectly liquid diet for twenty-four or thirty-six hours before operation. When on the table wash out the rectum and dilate thoroughly with a large speculum. Now seize the hemorrhoidal tissue at different

points of its upper boundary with "T" or the ordinary hemostatic forceps, as in the American, by slight traction everting the entire circumference. Next, divide the tissue at the junction of the mucous membrane with the true skin, encroaching as little as possible upon the integument. Dissect the hemorrhoidal tissue from the sphincter, being careful not to injure the muscle at any point. Having carried your dissection up as far as the hemorrhoids extend, remove the loosened tissue completely, catch up the bleeding points and, if necessary, tie them. If we were to stop at this point we would have so much contraction of the parts when they had healed that the patient would be in a worse condition than before the operation, just the condition that is many times presented after the Whitehead or the American operations. To obviate this difficulty we will go a step farther: Again put the sphincter on the stretch, and, before removing the speculum, make a free incision in the posterior median line to the extent of dividing all of the muscular fibers, and with the scissors trim away each edge of the wound so that they will not roll together and immediately unite. We now present a complete section of one half, three fourths, or possibly an inch of the lower part of the rectum with the sphincter ani laid bare and a deep wound in the posterior median line. We will now place within the rectum a moderately large cotton tampon with a strong double silk thread attached, loosen the integument a little to permit the skin to pass a little way into the anal orifice rather than drag the gut out. Now, by making traction on the threads attached to the tampon, we cause the bowel to descend, and by packing with gauze the posterior incision we prevent its healing except by granulation. Now place outside a small roll of cotton covered with gauze, to which the tampon threads are to be firmly tied. Thus we get an equal pressure from within and without, in most cases completely approximating the edges of the bowel and the skin. In twenty-four hours there will be sufficient union to retain the parts in their proper relations, at which time the tampon is to be gently removed, the packing taken out of the wound in the sphincter and the entire wound irrigated. Then repack the wound in the muscle and apply any dry dressing preferred. If dressed daily in this manner, being careful to keep the incision packed until it has filled in by granulation, and the

space between the membrane and the integument healed, as it will, either by first intention or by granulation, you have as a result a normal rectum capable of performing all its functions in a normal manner. In thirty-six hours after the operation give a laxative, followed in twelve hours by an enema, and see that the bowels move daily afterward. The advantages this operation offers over the Whitehead and the American are the same, inasmuch as the two are identical, with the exception that in the American the dissection is from above downward and in the Whitehead the procedure is reversed, the object in both cases being to remove the pile-bearing portion and unite the mucous membrane and the integument.

If you will take the trouble to examine a few cases that have been operated upon by either of the above methods you will find that, even as long as one to two years afterward, there is a band of cicatricial tissue entirely encircling the anus where the stitches have been, feeling very much like a wire, and which stiffens the muscles so that absolute control is impossible, a state of affairs which must be experienced to be fully appreciated. While this is not the inevitable consequence of these operations it is true of a vast majority of cases. We also know that it is necessary to continue to dilate the sphincter for weeks or even months after these operations, in order to prevent such a degree of contraction as will leave the patient a prey to insomnia, constipation, dyspepsia, nervous debility, etc.

Then again the stitches almost invariably slough out, leaving a gaping and suppurative surface instead of a clean healthy one, as in the case where no stitches are used. I assert that in stitching the gut to the skin the parts are thrown so far out of their normal relations that they will never have their normal action; but approximate them by a moderate pressure, as I have suggested, and nature will make allowance for the tissue that has been destroyed. The feature of this operation is the posterior incision, which, filling in by granulation, allows for the contraction which follows. My personal experience leads me to give this method the preference over the clamp and cautery. With the latter it is impossible to make a complete section of the hemorrhoidal region, and those of us who have had experience and an opportunity to watch results find that no cases are so

prone to recurrence of the trouble as those having been treated with clamp and cautery.

As for the practice of tying off large masses of tissue, and leaving the stumps to slough away, thereby exposing the patient to danger of sepsis from absorption, we can only marvel that any thing so unsurgical and so cruel has ever been countenanced by the profession. But the ligature has had its day and may well be relegated to the curio-shops, where it will rank with the rack and thumb-screw of Inquisition days. We hope that none of our readers are so antiquated in their ideas that the remarks on ligation can be accepted as personal.

Elliott, Llewellyn, Washington, D. C.: Fistula in Ano. (*Virginia Medical Monthly.*)

No age is exempt from this affection, as Mathews mentions a case in a child only three weeks old, upon which he operated.

Every fistula is the result of an abscess. This abscess may be the result of an injury, either within or without the bowel, or be the attendant of a scrofulous or a tuberculous degeneration of the tissues about the rectum. Fistulæ always progress from bad to worse; they are either complete, blind internal, blind external, or horseshoe shaped. These fistulous tracts are lined with a cartilaginous material, hard and tough; it has no vitality, and must be cut through before healing can occur.

Fistula in ano, like fistula in any other part of the body, will occasionally disappear spontaneously, but this will afford no excuse for doing nothing in these cases. Patients, presenting themselves, will oftentimes ask whether there is any treatment other than operative—radical treatment—and there are some practitioners who, speculating upon their fears, encourage them to earnestly pursue this shibboleth of "treatment without pain and without the knife—one thousand dollars reward," etc. With such men the profession is unfortunately cursed, and the sooner we educate the general public to accept the dictum of progressive physicians, the better for both patient and physician.

The treatment of fistula in ano resolves itself into that with caustics, injections, dilatation of the sphincter, electrolysis, and division either by the ecraseur, the ligature, or the knife. All treatment has for its object the destruction of the unhealthy

granulations, the so-called "pyogenic membrane" lining the canal. The destruction of these granulations may be accomplished by means of escharotics, nitric acid, carbolic acid, nitrate of silver, or iodine; but their action is slow, and their employment may be followed by abscess and other complications.

However good the treatment by escharotics, I fail to understand how the simple cauterization of a thick, cartilaginous lining can effect a cure, even though sufficient inflammation should ensue to terminate in sloughing and abscess, since the canal will certainly heal with a portion of this lining remaining, ready at any time to be awakened by the slightest of the causes which acted in the beginning.

The plan of treatment of fistula in ano with the ligature does not present one single point which would dignify it with a right to consideration in any case coming to my hands for relief. Only the very simplest, the most superficial fistula would respond to its curative influence.

That it causes pain, at times confines to the house, is slow in its action, does not make a clean cut, does not divide the bottom of the fistulous tract, can not be denied. The uncertainty of the location of the internal opening, which has oftentimes to be searched for, will also decide against its application. Then, again, the ligature, either elastic or silk, must be tightened as it becomes slack. With these objections, it is useless to describe its application.

The best and only treatment which will withstand any and all objections is the treatment by the knife.

The plan I pursue is to have the bowels moved freely the day before operation; this to be followed by an enema on the morning of the operation; dilate the sphincter to its fullest extent; wash out the sinus with a one to forty solution of carbolic acid; find the internal opening with a probe; where there is no internal opening, make one; pass a grooved director through the sinus and divide with a *straight* knife. We have now an open tract, which is to be carefully examined for *branch* sinuses; wash this tract well with the carbolized water, and with a sharp curette remove the entire canal lining; where, however, the lining is very resistant, the knife and scissors must be employed until we have removed every particle of the lining.

Should bleeding be free, as it will be very often, apply ligatures of catgut. We have now a cleanly cut wound, every portion in good condition, and there remains but one more step—that is the closure of the wound. This is done with a suitable curved Hagedorn needle, and with silk or silk-worm sutures, passed deeply under the base of the wound, uniting the sphincter at the same time. Iodoform is applied, then gauze and cotton, the whole retained in place with a T bandage. For a few days the bowels should be confined with opium. As an anesthetic, cocaine, hydrochlorate solution, or chloroform may be used. Under this treatment, patients are discharged from treatment well in from two to three weeks. This treatment originated, I think, with Dr. Frederick Lange. I do not now pack a fistula and allow it to heal by granulation from the bottom.

Lavenstein: The Formation of an Artificial Anus. (*Centralblatt für Chirurgie; Therapeutic Gazette.*)

The author treated a patient suffering from obstruction of the bowel due to ovarian tumor. On celiotomy the tumor was found to be carcinomatous and extensively infiltrating, so that the ileum was compressed just before it passed into the colon. The ileum was divided above the stenosis between two rubber ligatures; the distal end was closed and dropped back into the belly cavity; the proximal end was separated from its mesentery for about seven inches, drawn out as far as possible, and secured at its base by a circular suture to the parietal peritoneum, thus leaving, as it were, a long spout projecting from the belly cavity. By removing the rubber ligature the contents of the gut were evacuated without any danger of soiling the peritoneal cavity.

In the after-treatment this penis-like projection was found especially convenient, since it could be carried into the neck of a urinal, which thus received all the fecal discharges.

The patient operated on perished soon after, so that the adoption of retention apparatus was not necessary, but the author holds that it is evident that after an operation thus performed it would be easier to control the escape of the bowel contents than when the artificial anus opens at the level of the skin. It is especially worthy of note in this case that, although the gut was freed from its mesentery attachment, there was no sign of sloughing.

GASTRO-INTESTINAL DISEASE.

De Garmo, W. B.: New York City. A Study of Thirty-Nine Cases of Strangulated Hernia. (*Annals of Surgery.*)

During the past ten years I have seen in consultation or among my own patients thirty-nine cases of *true* strangulated hernia, of which notes have been kept, and a brief detailed report of which accompanies this summary.

I use the term "true strangulated hernia" as indicating the exclusion of all cases of temporary incarceration without intestinal obstruction, as well as numerous cases of incarcerated and inflamed omentum which have been seen during the same period. Nor does it include a large number of infants which have been brought to me, both at my clinic and privately, whose hernias have only been strangulated for brief periods, regarding which notes have not been kept.

A very brief summary of these cases may be given as follows:

Twenty-six males and thirteen females, whose ages range all the way from seven months to eighty years of age. Twenty-nine had inguinal, eight had femoral, and two had umbilical hernia.

In twenty-two instances the hernias were reduced without operation. Ether was given seventeen times, chloroform six, while two were operated upon after injecting the vicinity of the tumor with a four-per-cent. solution of cocaine. Of the entire number three died. I wish first to draw your attention to those hernias reduced without operation, as I believe that their proportion is in excess of the usual number so relieved, and that the methods of handling them were different in some respects from those ordinarily adopted. The word "taxis" does not carry with it any very definite meaning, and the manner in which it is generally executed is even more uncertain than the definitions which are to be found in the dictionaries. I have therefore been inclined to drop the word in the following reports, and use a term instead that indicates the method used. That the method has merit over those in ordinary use is indicated by the fact that, of the twenty-two hernias reduced, sixteen cases had been worked with by twenty-five physicians before I saw them, and only six made direct application to me. I desire to describe briefly this

method of reducing strangulated hernia, as followed by me for many years. It is referred to in the following case-histories as "traction" and "compression."

Try at the outset to assure your patient that you are not going to add to his torture, and confirm this in his mind by handling the tumor with the greatest gentleness. By this you will secure his co-operation instead of unconscious resistance. Place him on a table with the hips well elevated instead of working over a soft and yielding bed. An ordinary kitchen table, with the legs at one end elevated six or seven inches, answers every purpose, and is obtainable in almost every house.

When the patient is in place, first gently crowd the entire abdominal contents away from the lower abdomen toward the chest, then work the fingers of one hand around the neck of the tumor where it issues from the abdomen, holding its bulk in the palm of the hand, if possible, and, instead of trying to push the tumor back into the abdomen, try to draw it farther down. Now, with the other hand, grasp the canal with its contents (if inguinal hernia) gently but firmly between the thumb and fingers, and, while making traction and compression with the hand that is holding the tumor, manipulate the canal with a "kneading" motion. This can be done without adding to the patient's pain to any extent, and it will succeed when more rude handling fails. When you push upward on a strangulated hernia, usually you carry it up over the edge of the ring upon the abdominal wall, and accomplish nothing more. In the method suggested, by traction, you lengthen out the mass that is blockading the canal, favoring the effect which you afterward produce by compression, that is, the partial emptying of engorged blood-vessels, the displacement of imprisoned gases and fluids. This is further aided by the action of the fingers upon the canal, which tend to work the bowel free at the point of constriction.

Shall we give anesthetics as an aid in the reduction of hernia? More lives are lost than saved by giving them for the express purpose of reducing a strangulated hernia. Remember that but one point is gained, and that a dangerous one, the insensibility of the patient. Give the anesthetic only when you are all ready to operate, and then bear in mind that great force is far more dangerous than an operation. With children it is an important aid,

as it removes the element of fear. Internal remedies are worse than useless, as they lead to the belief that something is being done, while in reality valuable time is being wasted. External remedies have been, with me, limited to the use of ice, and I have seen very beneficial effects from its application when the tumor contained large masses of inflamed omentum.

The hypodermic syringe is a blessing to the sufferer while awaiting the preparations for an operation, or the arrival of the operator, but it has deluded more than one physician and patient until death claimed its victim. It has no place in the treatment of strangulated hernia other than to palliate suffering. Aspiration was resorted to once in this series of cases, and it is not approved of as an aid in reduction. The youngest child that it was found necessary to operate upon was thirteen years of age. The method of reduction referred to, carried out with extreme gentleness while the child was under the influence of chloroform, has been attended with success in every instance, in infants and children under this age.

In the case-notes will be found mention of the occurrence of bloody evacuations, after the reduction of strangulated bowel, as common in infants. This has also been noted in two or three cases of adults. Of the seventeen operations seven were upon men and ten upon women, only three reductions without operation being accomplished among the latter. I wish to call special attention to the operation on old people. Two at seventy-five, one at seventy-six, one at seventy-seven, and one at eighty, nearly all delayed or complicated cases, and yet all recovered promptly.

The three fatal cases are all believed to be chargeable to delayed operation. All three could in all probability have been saved by prompt surgical means.

At the present day it is almost criminal for a medical man, who will not operate himself in cases of this character, not to call in promptly some one that will.

Many things of interest, and we believe of importance, will be found in the case-histories that can not be mentioned in the brief time at my disposal, but there are none believed to be of more importance than the use of hot water, and its effect upon damaged bowels, as it has been carried out in a number of the cases. Its effect is almost magical, and the rapidity with which

it re-establishes the circulation and restores normal color is a surprise to those who witness it for the first time.

I can not too strongly urge the adoption of this simple means. I feel certain that in some of these cases resection would have been considered necessary by the enthusiastic advocates of the various methods, and I am sure that the cases would have given me far greater concern if I had not been able to demonstrate the vitality of the bowel before returning it to the abdomen.

1. *Conclusions:* Prompt operation saves complications and life.
2. Infants seldom require operation.
3. Medicines and external applications are dangerous, as their use causes delay.
4. Operations done early are neither difficult nor dangerous.
5. Rough handling is more dangerous than an operation.
6. Morphia masks symptoms, but does not stop destructive changes.
7. Local symptoms are misleading.
8. Hot water saves resection, or furnishes prompt evidence of its necessity.
9. Operate rather than attempt the reduction of a hernia acutely strangulated for twenty-four hours.
10. Open to internal ring in every instance.
11. Always draw the bowel down far enough to examine the actual point of constriction.
12. It is not considered good practice to give cathartics after strangulation and the return of suspicious bowel.

CHAMPIONNIERE, LUCAS: THE RADICAL CURE OF UMBILICAL HERNIA. (*Rev. de Chir.; British Medical Journal.*)

The author advocated at the recent French Congress of Surgery at Lyons the radical cure of umbilical and epigastric hernia. Although such treatment is not so frequently applied to these as to other forms of hernia, the indications for operation may be regarded as more urgent in the former. Umbilical hernia usually attains an enormous size, and causes much discomfort. It is never effectually retained by truss or bandage. It assists in bringing about rapid organic failure marked by diabetes, albuminuria, and premature senility, and is almost always complicated with obesity and pulmonary emphysema. When the her-

nia has acquired a considerable volume it is no longer amenable to operative treatment, as the swelling will very probably return through the large opening formed in the abdominal wall. In cases of small umbilical hernia, on the other hand, a solid radical cure may be effected. As umbilical hernia presents itself in many varied forms, it is impossible to state absolutely the details of the operation for its radical cure. In this, as in other forms of hernia, the main objects of such treatment are to remove the sac and to secure its pedicle, and to close the orifice in the abdominal wall by sutures arranged in rows so as to establish a firm cicatrix. In most cases in which the sac is removed it is necessary to excise the umbilicus. In operating on umbilical hernia the author follows his usual custom, in practicing radical cure, of removing large masses of omentum, and thus by reducing the tension of the abdominal wall, lessens the risk of relapse. The opening into the peritoneal cavity is closed by five rows of sutures—one for the peritoneum, one for the skin, and three for the different muscular layers. In cases of small umbilical hernia this operation, it is stated, has had excellent results. In large swellings, however, there is a constant tendency to relapse. The secret of the successful surgical treatment of umbilical hernia is never to allow the swelling to attain a large size. The extreme gravity of a large umbilical hernia with regard to the general health of the subject, the especial danger attending its strangulation, and the inevitable enlargement of the swelling should lead surgeons to propose an operation with a view to radical cure in every instance in which the swelling is still small and in an early stage. The author has operated on eighteen cases of umbilical hernia with good results, but in some of the more severe instances he had to contend with serious symptoms of pulmonary congestion. He has operated also in eleven cases of epigastric hernia. This form of hernia, unlike umbilical protrusions, has hardly any tendency to increase in size. It is usually painful, and is often accompanied by vomiting and various intestinal troubles which can not be easily accounted for. The palliative treatment of this form of hernia is not satisfactory, but the affection may be readily and effectually cured by operation. The hernial orifice should be freely incised, and the sac drawn forward, opened, detached from surrounding parts,

and removed, together with any omentum it may contain. The pedicle of the sac should be ligatured before division as far back as possible. The opening is then closed by three rows of sutures —one row for the skin, one for the peritoneum, and a third for the intermediate portions of the abdominal wall. In the author's practice this operation for the radical cure of epigastric hernia has never been followed by relapse.

STRETTON, J. LIONEL: INTUSSUSCEPTION IN THE MALE. (*The Lancet; Universal Medical Journal.*)

The patient was a male aged twenty years. On July 12, 1894, while lifting a sixty-four-gallon barrel of beer from a cart, the patient suddenly felt a severe pain in the "stomach," which made him drop the barrel. He walked home, about half a mile, and went to bed, when the pain increased, and he started vomiting. He was given opium, and during the night his bowels acted naturally. On admission to the hospital, at 10 A. M., on July 13th, the patient walked up to the ward quite easily, and did not appear to be suffering much pain. On examination of the abdomen the recti were rigid, there was no distension, and the pain, which was referred to the epigastrium, was only slightly increased on pressure. During the day flatus was passed at intervals, and vomiting occurred twice; the pulse was 75, and the temperature 99.6° F. (37.6° C.). He passed a quiet night and slept several hours, and there was no increase in his symptoms. On the afternoon of the 14th he commenced to vomit again and continued until evening, during which time about fifty ounces (1,550 grams) of semi-digested milk, which was bile-stained, were egested, flatus was passed freely, and there was considerable hiccough; the pulse was 78, the temperature 99.2° F. (37.3° C.), and the respiration 25. At 9:45 A. M., as the symptoms appeared to be increasing, it was decided to explore the abdomen. On opening the abdominal cavity nothing abnormal was seen; a loop of bowel was withdrawn and traced to the lower end of the ileum, where an intussusception about four inches long was discovered. There were flakes of lymph in the neighborhood, and considerable difficulty was experienced in reducing the invaginated bowel, which was found to be edematous and considerably congested. The whole was returned

to the abdomen and the wound closed, a drainage-tube leading down to the damaged bowel being inserted. July 15th: The patient had passed a quiet night; slept several hours; no hiccough or vomiting; passed flatus. Has had 1 drachm (4 grams) of hot water every three hours. July 17th: Temperature 98.2° F. (36.8° C.); pulse 50. To have milk and water. July 21st: Bowels acted after enema; stitches removed; wound healed. August 2d: Patient up and about. The case was of interest on account of the very slight constitutional symptoms accompanying such acute local mischief, and this was explained as the patient convalesced, when it was found that his normal pulse was about 50 and his temperature about 97° F. (36.1° C.), showing that in reality he was suffering from severe constitutional symptoms previously to the operation. It emphasized the advisability of an exploratory operation in doubtful cases.

Crittenden, Wm. J., Unionville, Va.: Chaparro Amargoso in the Treatment of Chronic Dysentery. (*Virginia Medical Monthly.*)

Some months ago we quoted from an article on this subject. The following is an addition to the literature:

This bush is indigenous to South West Texas, growing on thin mesquite land. All parts of the bush possess medicinal virtues—bark, leaves, flowers, fruit, thorns, and tendrils. All of these parts yield their virtues to boiling water.

It is said that after the invasion of Mexico by General Taylor's army, upon their return, a decoction made from the tendrils of this bush proved of great value to his soldiers, who were suffering from camp flux.

A fluid extract has been prepared by Messrs. Sharp & Dohme, the dose of which, in my experience, is from ten to sixty drops. It is an intensely bitter, non-nauseating tonic, alterative, stimulant, astringent, and anodyne, not followed by any evil effects whatever.

On May 31, 1890, I was called to see Mrs. C., who was suffering with acute dysentery. I treated her promptly with calomel, salines, astringents, intestinal irrigation, and perfect rest. At the end of a week she had recovered entirely, apparently; but in three or four days she was taken again. In this case

treatment was unsuccessful, the case lapsing into a chronic form. For three years I treated her with all known astringents, laxatives, tonics, medicinal waters, intestinal treatment, diet, change of air, scenery, etc. It is only fair to say that I had the best medical skill of the land in consultation. At the end of three years, behold my patient reduced from one hundred and forty pounds to eighty pounds.

Pulse small, weak, quick, and feeble; dejections ranging from one or two to twenty-four during the day. Eyes sunken, facial bones projecting, skin dry and brawny, complexion muddy, resembling a person suffering from malignant disease; voice weak and feeble. Such was her condition when I began the use of fluid extract chaparro amargoso, in ten-drop doses every three hours, in distilled water, and gradually increased to twenty-five drops. Note the change in ten days: Dejections began to assume a fecal character; pulse now regular; skin clearer. Continued treatment. At the end of a month the improvement was marked. I now gave it in teaspoonful doses three times a day. In six months my patient was entirely cured. Note her to-day: A large, corpulent lady, weighing one hundred and sixty-eight pounds, a marvel to herself, to her friends, and a pride to her physician.

I have also used it in many cases of chronic dysentery with favorable results, but not so marked as in this case.

I would also ascribe to it germicidal properties.

Wiener, Von Jaksch's Clinic: Estimation of Hydrochloric Acid. (*Centrablatt für innere Med.; British Medical Journal.*)

The author speaks of Mierzynski's gas volumetric method for the quantitative estimation of hydrochloric acid in the stomach contents (*Epitome, British Medical Journal*, 1894). The acids are converted into barium salts, and eventually a barium chromate is obtained. The amount of hydrochloric acid present is then estimated by measuring the quantity of oxygen to be obtained from this chromate. The results obtained by this method and by the Sjöqvist-Jaksch method were remarkably alike, so that the author thinks that this method is available for clinical work, but he does not grant that it can claim advantages in regard to simplicity.

Book Reviews.

The Care of the Baby: A Manual for Mothers and Nurses. By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children in the Hospital of the University af Pennsylvania, etc. Philadelphia: W. B. Saunders, 925 Walnut Street. 1895. Price, $1.50.

The importance of this little work can not be fully realized until its pages are perused.

The difficulty of writing a book on such a subject "for mothers and nurses" is obvious; but in the book before us Dr. Griffith has succeeded admirably in not saying too much, and in saying what he has said very much to the point.

A little knowledge is oftentimes a dangerous thing, and in a book upon the care of children it is often difficult to know just where to draw the line, just what to tell the mother, but Dr. Griffith has been successful in drawing that line in just the right place.

The book is attractively gotten up, consisting of three hundred and ninety pages, with numerous well-chosen illustrations and five half-tone plates. The first chapter is entitled, "Before the Baby Comes." Owing to the prevalence of the belief that most women have regarding maternal impressions, it occurs to us that a positive denial of the possibility of a child's being marked by maternal impressions would have been better than to have stated "as there is a possibility that such influences exist." The fear of these impressions keeps nervous women in a constant state of uneasiness, and it should be the duty of every one writing on such subjects to put their minds at rest regarding this fallacy.

In the list of articles named as being needed at the time of confinement it seems queer that no mention is made of chloroform. In our experience ether is rarely given except in prolonged obstetric surgery.

It is gratifying to have the maximum normal temperature of the infant placed at 99.5° instead of 98.6°, as has been heretofore taught. We do not agree that the clinical thermometer should be in every household; many mothers are too nervous and high-strung to be able to use one intelligently.

The regular weighing of the infant is rightly given prominence, but how few mothers take the trouble to ascertain the progress of their infant's weight! They should be taught how important this knowledge is.

A valuable addition to the list of articles to be found in the baby's basket would be a bottle of the saturated solution of boracic acid, of which no mention is made on page 67.

As this is a book to educate the mother, to bring home more forcibly the importance of nursing their infants, the quotation of some figures showing the comparison in the death-rate of artificial and breast-fed infants would have been wise.

The description of Cheyne-Stokes respiration is, we think, decidedly out of place in a book of this character. Difficult often for medical men to recognize, how much more so for mothers, who are apt to recognize in a sigh and a few hurried inspirations preparatory to a cry the alarming symptom described. We think the line is not drawn quite soon enough here.

It is with interest and satisfaction that we note the description of *membranous croup* under the head of *Diphtheria*, and the naming of *capillary bronchitis* and *pneumonia* as being synonymous.

Plate IV would have been best left out, as it looks as much like smallpox as measles, and can not possibly assist the mother to make a diagnosis.

We regret that so much stress is laid upon the child's wearing a binder, which the author recommends in so many places.

The arrangement of the text is excellent, the various chapter-headings being "Before the Baby Comes," "The Baby," "The Baby's Growth," "The Baby's Toilet," "The Baby's Clothes," "Feeding the Baby," "Sleep," "Exercise and Training, Physical, Mental, and Moral," "The Baby's Nurses," "The Baby's Rooms," "The Sick Baby," and an appendix which contains many valuable formulæ. A very complete index follows the text.

Though written for "mothers and nurses," physicians and students will find much of practical importance in its pages for them. H. E. T.

Syphilis. By Alfred Cooper, F.R.C.S., Eng., Consulting Surgeon to the West London Hospital; Senior Surgeon to St. Mark's Hospital for Fistula; Late Surgeon to the Lock Hospital, etc. Second edition. Enlarged and illustrated by twenty full-page plates, twelve of which are colored. Edited by Edward Cotterell, F.R.C.S., Eng., Surgeon (out-patients) London Hospital, etc. London: J. and A. Churchill, 11 New Burlington Street. 1895.

The first edition of Mr. Cooper's work has long been exhausted, and the profession had begun to think that it was to miss the pleasure and profit of a second edition. We are glad to welcome so valuable a work. The author is well known not only in his own country but in the States as well. His late book on Rectal Surgery, conjointly edited with Mr. Edwards, was recently reviewed in this journal. Mr. Cooper has a graceful and entertaining style in writing, and all subjects are treated with a terseness which is refreshing. This book is fully up to date, embracing all the progress that has been made in the department of venereal diseases in the last decade. The author's vast experience in this special field, having been surgeon to the Lock Hospital for twenty years, enables him to write as an authority, and nothing speculative is in the book.

One attractive feature is the arrangement by the author of discussing the effects of syphilis upon *special* organs. This is systematically done, and so paged as to enable the reader to find immediately what he desires. In this day of much dispute as to the method by which syphilis affects the rectum it is pleasing to the reviewer at least, who has vigorously assailed the doctrine promulgated by Grosselin and his school, that "syphilitic contraction of the rectum is only caused by soft chancres," to hear so eminent an authority as Mr. Cooper say "*Gummatous deposits and the ulceration to which they give rise are the most common causes of syphilitic affections of the rectum.*" In another place he uses this language, "Gummatous deposits and infiltration of the submucous tissue are the most common causes of syphilitic ulceration and *stricture* of the rectum." This proposition is so self-apparent to the close observer of large experience, that it is a wonder that such an authority as Fournier has any followers at all. The book is splendidly illustrated by colored drawings, printed in large type, is excellently bound, and should be in the hands of every intelligent physician. J. M. M.

System of Surgery. Edited by FREDERICK S. DENNIS, M. D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College; Visiting Surgeon to the Bellevue and St. Vincent Hospitals; Consulting Surgeon to the Harlem Hospital and the Montefiore Home, New York; President of the American Surgical Association; Graduate of the Royal College of Surgeons, London; Member of the German Congress of Surgeons, Berlin. Assisted by JOHN S. BILLINGS, M. D., LL. D., Edin. and Harv.; D. C. L., Oxon.; Deputy Surgeon-General, U. S. A. Vol II. Minor, Plastic, and Military Surgery; Diseases of the Bones; Orthopedic Surgery; Aneurism; Surgery of the Arteries, Veins, and Lymphatics; Diseases and Injuries of the Head; Surgery of the Spine; Surgery of the Nerves. Philadelphia: Lea Brothers & Co. 1895.

The second volume of this great work on surgery bears out the prediction made by this journal, that it would prove to be a "master work." To say that the second volume is equal to the first is paying it a very high compliment. Among the contributors to this volume are such well-known authorities as Henry R. Wharton, M. D., George R. Fowler, M. D., William H. Forwood, M. D., Nicholas Senn, M. D., Virgil P. Gibney, M. D., Lewis A. Stimson, M. D., Frederick S. Dennis, M. D., Frederick H. Gervish, M. D., Roswell Park, M. D., W. W. Keen, M. D., and John B. Roberts, M. D.

With such an array of talent the work could not fail of success. Every one is a master in surgery, and deals with his subject as an old soldier who has met and downed many a foe. Too much praise can not be accorded the publishers. The book is remarkably well gotten up, splendid type, the best of paper, and the binding faultless. Surely better surgeons will be made by possessing such a work. To America be it now said, "nowhere can so good a book be published." Thanks from the entire profession are due Dr. Dennis for giving us so excellent a treatise on surgery.

The American Academy of Railway Surgeons. Official Report of the First Meeting held at Chicago, November 9, 1894. Edited by R. HARVEY REED, M. D., Columbus, Ohio. Chicago: American Medical Association Press. 1895.

This volume is a very creditable work of one hundred and forty pages. That there has been a need for such an organization every surgeon knows who has met with the many and varied injuries in his capacity of surgeon to the large and small railways, a society in which the "railway surgeon can exchange experience and learn

how best to treat the great army of injured employes and passengers who come annually under his care in such a manner as to give them the best results, with the least loss of time, and a minimum amount of suffering, thus reducing to the lowest ebb and amount of damages against the company." A careful perusal of the pages of this report bespeaks a prosperous career of the American Academy of Railway Surgeons.

A Hand-book of Tuberculosis Among Cattle. Compiled by HENRY L. SHUMWAY. Boston: Roberts Brothers. 1895.

This is a little book of one hundred and seventy-eight pages, containing a great deal of practical information, and will serve the purpose of educating not only the profession, but the general public to the importance of more definite and complete knowledge of this dread scourge. It deserves a wide circulation.

ANTISEPTIC GAUZE.—The subject of gauze dressings, and especially a consideration of what is the proper standard for gauze, has recently been very much discussed. A very readable summary of the question is contained in a monograph of twenty-four pages, issued by Johnson & Johnson, in which is discussed gauze cloth, its nature and use. Quality required for surgical dressings. Comparison of gauze used by various manufacturers and hospitals. Authoritative processes and formulas as given by surgical authorities used in hospitals. Authoritative works including those for the manufacture of Linton Moist Gauze. Standard for gauze as discussed by leading authorities, including Lister's standard, and a discussion of the finished basis and a standard strength based upon the strength of the solution adjusted definitely to the measure and weight of the gauze; with opinions of various surgeons as to a proper standard. The book also contains a discussion of moist and dry dressings, and an explanation of the so-called "comparative tests" for gauze.

Books and Pamphlets Received.

THE HEART AND THE CYCLE RIDER.—There are further injuries done to the youth, male or female, through other organs of the body and especially through the heart. Dr. Kolb, as well as myself, has found that it is the heart which is principally exercised during cycling. So soon as brisk cycling has commenced the motions of the heart begin to increase. In this respect cycling differs from many other exercises. Rowing tells most on the breathing organs; dumb bells and other exercises where the muscles are moved without the progression of the body, tell most on the muscles; while in climbing and long pedestrian feats it is the nervous system that is most given to suffer. There is not a cycle rider of any age in whom the heart is not influenced so as to do more work, and although in skilled cyclists and trained cyclists a certain balance is set up which equalizes the motion, such riders are not exempt from danger. I have known the beats of the heart to rise from 80 to 200 in the minute, in the first exercise of riding, an increase which, for the time, more than doubles the amount of work done, a very serious fact when we remember that the extreme natural motion of the heart allows it to perform a task equal to raising not less than 122 foot-tons in the course of twenty-four hours, that is to say, over 5 foot-tons an hour. In the young we may apply the same argument to the heart as we have done to the skeleton; the heart is undergoing its development, and it is an organ which can not without danger be whipped on beyond its natural pace. What occurs with it under such circumstances is that it grows larger than it ought to grow, that it works out of harmony with the rest of the body, and is then most easily agitated by influences and impressions acting upon it through the mind. I have many times seen this truth illustrated too plainly, and I doubt whether in the young, after extreme exercise, such as that which arises from a prolonged race, the heart ever comes down to its natural beat for a period of less than three days devoted to repose.—From "What to avoid in Cycling," by Sir Benjamin Ward Richardson, M. D., in North American Review for August.

"A PERFECT PLASTER, NOBLY PLANNED, TO WARM AND COMFORT."—A mustard plaster made according to the following directions will not blister the most sensitive skin: Two teaspoonfuls mustard, two teaspoonfuls flour, two teaspoonfuls ground ginger. Do not mix too dry. Place between two pieces of old

muslin and apply. If it burns too much at first lay an extra piece of muslin between it and the skin; as the skin becomes accustomed to the heat take the extra piece of muslin away. September *Ladies' Home Journal.*

Contagious Eye Diseases and Preventable Blindness, their Etiology, and the Methods for their Prevention. By J. Morrison Ray, M. D., Louisville. Reprint from the American Practitioner and News.

The Treatment of Fistula in Ano by Lange's Method of Immediate Suture of the Tract. By Lewis H. Adler, jr., M. D., Philadelphia. Reprint from the Philadelphia Medical News.

Strabismus as a Symptom, Its Causes and its Practical Management. By Leartus Connor, M. D., Detroit, Mich. Reprint from the Journal of the American Medical Association.

Vaginal Hysterectomy for Uterine Myomata and Diseases of the Adnexa. By William H. Wathen, M. D., LL.D., Louisville. Reprinted from the Journal of Obstetrics.

Annual Report Department of Health, City of Chicago, for the year ending December 31, 1894. Arthur R. Reynolds, Commissioner of Health. Chicago. 1895.

Supra-Pubic Cystotomy for Calculus of the Bladder. By H. A. Mesenbach, M. D., St. Louis. Reprint from the Journal of the American Medical Association.

The Radical Cure of Hydrocele. By D. C. Hawley, A. B., M. D., Burlington, Vt. Reprint from the Journal of the American Medical Association.

Circular on the Care and Disposition of Persons Found Unconscious on the Streets or Elsewhere. Reprint from the Brooklyn Medical Journal..

Clinical Observations on Laryngeal Paralysis. By J. Morrison Ray, M. D., Louisville. Reprint from the American Practitioner and News.

Report of a Case of Prostatectomy and Encysted Calculi. By J. A. Sutcliffe, A. M., M. D. Reprint from the Indiana Medical Journal.

Serum Treatment of Diphtheria. By William Cheatham, M. D., Louisville. Reprint from the Louisville Medical Monthly.

Deformed Coccyx, Causing Dystocia and Death of Child: Report of Two Cases. By E. A. Tucker, M. D., New York.

The Infiltration Method of Local Anesthesia in Genito-Urinary Surgery. By Bransford Lewis, M. D., of St. Louis.

Are Conservative Amputations Always in the Best Interests of the Patients? By Charles Truax, Chicago.

Alcoholism. By Thomas P. Satterwhite, M. D., Louisville. Reprint from Cincinnati Medical Journal.

Hemorrhoids. By M. Borts, M.D., Cleveland, Ohio. Reprint from Cleveland Medical Gazette.

The History of Medicine and Surgery in Georgia. By Luther B. Grandy, M. D., Atlanta.

A Few Practical Hints to Nursing Mothers. By Harry R. Purdy, M. D., New York.

Some Current Errors Respecting Insanity. By C. B. Burr, M. D., Flint, Mich.

Report of the Stamford Typhoid Fever Epidemic. By Prof. Herbert E. Smith.

The Outbreak of Typhoid Fever at Wesleyan University. By H. W. Conn.

Amputations in the Light of Prothetical Science. By Charles Truax.

Gauze Dressings in Surgery. By Johnson & Johnson, New York.

Transactions of the American Pediatric Society, Session of 1894.

Supra-Pubic Cystotomy. By J. T. Freeland, M. D., Bedford, Ind.

Notes and Queries.

A Thing of Beauty and Usefulness.—There is no one thing that the medical profession is so discomfited over as the "tales of woe" that patients tell of poor and imperfect syringes. They either "won't work at all" or get easily out of fix. The water is either too hot or too cold when it flows. Heretofore there has been no way of telling the exact temperature of the water used. That question is settled now, thanks to Mr. Charles Roome Parmele, of 98 William Street, New York. The new syringe is known as "The King," and the title of Queen should also be used, for it is equally serviceable to man and woman. It should be in every household, and certainly should be possessed by every sick person. A thermometer is in the syringe, and no mistake can be made. Then, too, the whole complete thing sells at a remarkably low price.

The Grand Army of the Republic, in response to hearty invitations, have swept down upon us, have been our guests for a week, and have left, loud in their praises of true Kentucky hospitality so lavishly shown them. No more important part of the preparations for their entertainment was there than the organizing of the medical corps to care for the sick during their stay; and this was most efficiently done by Dr. W. P. White, himself an ex-Confederate soldier, and Health Officer of this city, and a competent corps of assistants. There were a few serious heat prostrations, but none but what responded to prompt treatment. There were no fights, no drunks, and no deaths, as has been the history of the previous encampments.

Dr. John Long.—The medical profession has been advised that Dr. John Long has succeeded to the practice of the late lamented Dr. E. R. Palmer. At the solicitation of the widow of Dr. Palmer, Dr. Long now occupies the office which was formerly that of Dr. Palmer, and has associated with him the two sons, Ed. and Brent Palmer. Every physician in Louisville

recognizes in Dr. Long a worthy successor of the much-beloved Palmer, and every physician in the Union will be glad to know that the two sons of his have as their associate and adviser one so competent and willing to aid them as Dr. Long. Success to them in their specialty of genito-urinary surgery.

We have received a very tasteful announcement of the American Public Health Association, the next meeting of which is to be held in Denver, October 1, 2, 3, and 4, 1895. Its president, Dr. William Bailey, of this city, Drs. J. M. Mathews, and J. N. McCormack, President and Secretary of the Kentucky State Board of Health, respectively, will be in attendance from Kentucky.

At a recent meeting of the Trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

Dr. A. L. Hummel, on account of increasing business and the additional business facilities afforded in a larger city, has removed his offices to 108 Fulton Street, New York City.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to Editors of Mathews' Medical Quarterly, Box 434, Louisville, Ky.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the Quarterly will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

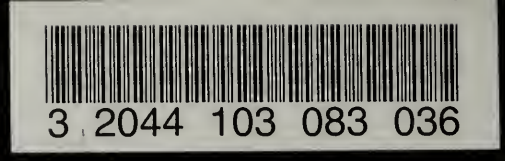
Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The Editors are not responsible for the views of contributors.

NB491


3 2044 103 083 036